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The Realm of Uncertainty: The Experience of Work in the Cumberland Coal Mines, 1873-1927

THEY WERE GIANTS: when they marched, the region shook. The coal miners, with their massive unions, their dramatic strikes, and their impassioned politics, dominated Maritime labour history from 1880 to 1930. In the coalfields from Minto to Glace Bay they created intricate mining labyrinths and communities so strong they survived the closing down of the mines beneath them. In the region as a whole their monuments can be found in the history of political protest, in the statute books, and above all in the history of the labour movement, which flourished when they were strong and languished when they were weak. In the country as a whole, their pioneering support of the modern welfare state, collective bargaining and third party politics made them central figures in the Canadian labour movement. No other working-class group in the region articulated an identity as strong and distinctive as theirs.

"Miners", the manager of the Springhill mine told a royal commission in 1888, "are queer people; you do not know them". As early as 1842, the image of the miner as a peculiar man can be found in the surprised comments of a visitor to Albion Mines, who described the colliers' restrictive apprenticeship practices and remarked, "the employer cannot send a single man among them". Grappling with this problem close to eight decades later, a writer in the Halifax *Herald* described the Cape Breton miners as being, quite literally, benighted: "Miners are, when at their work, shut out from the light of day, from the sunlight, from the freedom of surface life. Ever groping in semi-darkness, guided in their getting about by artificial light, they become canny, suspicious of hidden danger, ever on the defensive, and it is but natural that in a measure it stamps itself upon their demeanour, above, as well as below ground". Perhaps the most compelling and influential portrait of the coal miner as an unfathomable "Other" can be found in Hugh MacLennan's novel *Each Man's Son*. His miners are defined by their utter deprivation, by their tragic isolation from western civilization; shorn of their Highland dignity and culture, they enter the novel's vision as a dark, menacing, drunken blur. Such images of mining life tell us as much about the outsiders who constructed them as they do about the communities under study, and we see, in their evolution over more than a century, a mirror of the miners' declining status, from a tradesman vitally involved in the "march of improvement", to a member in a backward, inward-looking, "race apart", irremediably isolated and deprived by history.[1]

1 *Report of the Royal Commission on the Relations of Capital and Labour. Evidence — Nova*

How can we explain the emergence and persistence of this collective identity? The most common approach is to emphasize the isolation of a "homogeneous mass" of mine workers in conditions of economic and cultural deprivation. The "isolation theory" was given its classic expression by industrial relations writers Clark Kerr and Abraham Siegel in an attempt to explain why some occupations went on strike more frequently than others. Miners, sailors, longshoremen, loggers: such workers, they argued, formed "isolated masses", living in separate communities, with their own codes, myths, heroes and social standards, and with few "neutrals" to dilute mass antagonism towards absentee employers. More recently M.I.A. Bulmer, a British sociologist, has added nuance and depth to the "isolation hypothesis" by constructing an "ideal type" of the mining community. This community, removed from existing urban centres of population, has only minimal contact with the outside world. Mining dominates its local economy, for there are few alternative jobs to mining and the coal company controls the stores and housing. The community's working class has little contact with other social groups outside the community. Relationships established in one sphere (such as work) are reinforced in others (such as family, neighbourhood, and friendship). The solidarity based on such "multiplex" relationships then comes up against, and is powerfully reinforced by, the inevitable conflicts between coal miners and capitalist mine owners over the allocation of economic resources. Bulmer thus combined economic, geographical and social factors in a far subtler "cultural" interpretation of the mining community, while maintaining the traditional emphasis on "isolation".[2]

But it was precisely this emphasis on the coal miner as the "isolated" and somehow "archetypal" proletarian which later historical work found difficult to accept. French work on strike patterns and on the gradual evolution of peasants into miners questioned the "isolated mass" hypothesis, while British studies found a startling diversity of coal-mining traditions, some of them very similar to those of urban craftsmen. American coal-mining historiography questioned the "deprivation/isolation" tradition with studies of the coal miners' abilities to defend themselves in the workplace and to create relatively prosperous communities. Thus an historiographical shift in the last two decades has turned the

Scotia (Ottawa, 1889) [*Nova Scotia Evidence*], p. 297; J.S. Martell,"Early Coal Mining in Nova Scotia", *Dalhousie Review*, XXV (July 1945), p.171; *Herald* (Halifax), 22 June 1921; Hugh MacLennan, *Each Man's Son* (Toronto, 1971 [1951]); Don Macgillivray, "Glace Bay: Images and Impressions", in *Mining Photographs and Other Pictures: A Selection from the Negative Archives of Shedden Studio, Glace Bay Cape Breton 1948-1968* (Halifax, 1983), pp. 172-5; Elspeth Cameron, *Hugh MacLennan: A Writer's Life* (Halifax, 1983 [1981]), p. 6. For a general review of images of coal mining in British literature, see Robert Colls, *The Collier's Rant: Song and Culture in the Industrial Village* (London, 1977).

2 Clark Kerr and Abraham Siegel, "The Interindustry Propensity to Strike — An International Comparison", in Arthur Kornhauser, Robert Dubin and Arthur M. Ross, eds., *Industrial Conflict* (New York, 1954), pp. 191-2; M.I.A. Bulmer, "Sociological Models of the Mining Community", *The Sociological Review*, XXIII (February 1975), pp. 85-6.

terms of debate away from seeking to explain the coal miners as "archetypal proletarians", whose radicalism could be explained by their being a wretched and isolated "race apart", to studying the complexities of the coal miners' workplace and the interaction of their workplace autonomy with other traditions to create a distinctive variant of "working-class culture".[3]

Aspects of this historiographical shift have been reflected in much of the new work on the coal miners of the Maritimes, which has integrated economic, social and political approaches to produce as much empirical information on these workers as for any analogous group in Canada. Historical studies of the region's coal miners have been written since the end of the 19th century.[4] Popularly written books have looked at the miners' experience in various localities,[5] but the greatest part of the region's coal-mining historiography is still to be

3 See, among many other titles, Rolande Trempé, *Les mineurs de Carmaux, 1848-1914* (Paris, 1971); Donald Reid, *The Miners of Decazeville: A Genealogy of Deindustrialization* (Cambridge 1985); Edward Shorter and Charles Tilly, *Strikes in France, 1830-1968* (Cambridge, 1974); Joel Michel, "Politique syndicale et conjoncture économique: la limitation de la production de charbon chez les mineurs européens au XIXe siècle", *Le mouvement social*, No. 119 (avril-juin 1982), pp. 63-90; Royden Harrison, ed., *Independent Collier: The Coalminer as Archetypal Proletarian Reconsidered* (New York, 1978); Alan Campbell, *The Lanarkshire Miners: A Social History of their Trade Unions, 1775-1874* (Edinburgh, 1979); Keith Dix, *Work Relations in the Coal Industry: The Hand-Loading Era, 1880-1930* (Morgantown, 1977); John Gaventa, *Power and Powerlessness: Quiescence and Rebellion in an Appalachian Valley* (Urbana, 1980); Donald Miller and Richard Sharpless, *The Kingdom of Coal: Work, Enterprise and Ethnic Communities in the Mine Fields* (Philadelphia, 1985). Much of the recent historiographical work was brilliantly anticipated by Carter Goodrich, *The Miner's Freedom: A Study of the Working Life in a Changing Industry* (Boston, 1925). For a review essay, see J.H.M. Laslett, "The Independent Collier: Some Recent Studies of Nineteenth Century Coalmining Communities in Britain and the United States", *International Labor and Working Class History*, No. 21 (Spring 1982), pp. 18-27.

4 Among early secondary works on the region's coal miners,see Richard Brown, *The Coal Fields and Coal Trade of the Island of Cape Breton* (Stellarton, 1899 [1871]); Robert Drummond, *Minerals and Mining, Nova Scotia* (Stellarton, 1918); Robert Drummond, *Recollections and Reflections of a Former Trades Union Leader* (n.p. [Stellarton], n.d. [1926]); Eugene Forsey, *Economic and Social Aspects of the Nova Scotia Coal Industry* (Toronto, 1926); C.B. Wade, "History of District 26, United Mine Workers of America, 1919-1941", unpublished manuscript [1951], Public Archives of Nova Scotia [PANS]; C.M. Odell, "Men and Methods of the Early Days of Mining in Cape Breton", *Transactions of the Canadian Mining Institute*, XXV (1927), pp. 503-29; P.S. Mifflen, "A History of Trade Unionism in the Coal Mines of Nova Scotia", M.A.thesis, Catholic University of America, 1951.

5 Popular writing includes James B. Brown, *Miracle Town, Springhill, N.S.*(Hantsport, 1983); Roger D. Brown, *Blood on the Coal* (Windsor, N.S., 1976); Leonard Lerner, *Miracle at Springhill* (New York, 1960); Ronald H. McIntyre, *The Collier's Tattletale* (Antigonish, 1980); Paul MacEwan, *Miners and Steelworkers: Labour in Cape Breton* (Toronto, 1976); John Mellor, *The Company Store: J.B. McLachlan and the Cape Breton Coal Mines, 1900-1925* (Halifax, 1984 [1983]); Marjorie Taylor-Morell, *Of Mines and Men* (Minto, 1981). Valuable interviews and other materials relating to coal mining have been published in *Cape Breton's Magazine*. James M. Cameron's encyclopedic *The Pictonian Colliers* (Halifax, 1974) distinctively combines extensive research with a popular format.

found in unpublished theses.[6] Gradually some of this academic social history has found its way into print.[7] Moreover, an encouraging recent sign is the new interest shown in the history of the region's coal miners by academics outside

6 Unpublished theses and papers include Michael J. Earle, "The Rise and Fall of a 'Red' Union: The Amalgamated Mine Workers of Nova Scotia, 1932-1936", M.A. thesis, Dalhousie University, 1984; David Frank, "The Cape Breton Coal Miners, 1917-1926", Ph.D. thesis, Dalhousie University, 1979; Helen Goodwin, "Community, Class and Conflict: The 1909-1911 Springhill Coal Strike", B.A. thesis, Dalhousie University, 1980; Dennis W. Magill, "Migration and Occupational Mobility from a Nova Scotia Coal Mining Town", M.A. thesis, McGill University, 1966; Joe MacDonald, "The Roots of Radical Politics in Nova Scotia: The Provincial Workmen's Association and Political Activity, 1879-1906", B.A. Honours essay, Carleton University, 1977; Donald Macgillivray, "Industrial Unrest in Cape Breton, 1919-1925", M.A. thesis, University of New Brunswick, 1971; Donald Macleod, "Miners, Mining Men and Mining Reform: Changing the Technology of Nova Scotian Gold Mines and Collieries, 1850 to 1910", Ph.D. thesis, University of Toronto, 1981; Ian McKay, "Industry, Work and Community in the Cumberland Coalfields, 1848-1927", Ph.D. thesis, Dalhousie University, 1983; Ian McKay, "Workers' Control in Springhill, 1882-1927", paper presented to the meetings of the Canadian Historical Association, Halifax, 1981; Danny Moore, "The 1909 Strike in the Nova Scotia Coal Fields", unpublished research essay, Carleton University, 1977; Sharon Reilly, "The History of the Provincial Workmen's Association, 1879-1898", M.A. thesis, Dalhousie University, 1979; Hayden Trenholm, "Radical Labour and the Catholic Church: The Case of Cape Breton", B.A. thesis, Mount Allison University, 1977; William J. White, "Left-wing Politics and Community: A Study of Glace Bay, 1930-1940", M.A. thesis, Dalhousie University, 1978.

7 Published academic books and articles by historians include William Baker, "The Personal Touch: Mackenzie King, Harriett Reid, and the Springhill Strike, 1909-1911", *Labour/Le Travail*, XIII (Spring 1984), pp. 159-76; David Frank, "Class Conflict in the Coal Industry: Cape Breton, 1922", in G.S. Kealey and Peter Warrian, eds., *Essays in Canadian Working Class History* (Toronto, 1976), pp. 161-84; David Frank, "Company Town/Labour Town: Local Government in the Cape Breton Coal Towns, 1917-1926", *Histoire sociale/Social History*, Vol. XIV, No. 27 (May 1981), pp. 177-96; David Frank, "The Trial of J.B. McLachlan", *Historical Papers/Communications historiques* (1983), pp. 208-25; David Frank, "The Miner's Financier: Women in the Cape Breton Coal Towns, 1917", *Atlantis*, VIII (Spring 1983), pp. 137-43; David Frank, "Contested Terrain: Workers' Control in the Cape Breton Coal Mines in the 1920s", in Craig Heron and Robert Storey, eds., *On the Job: Confronting the Labour Process in Canada* (Toronto 1986), pp. 102-23; David Frank and Don Macgillivray, "Introduction" in Dawn Fraser, *Echoes from Labor's War: Industrial Cape Breton in the 1920s* (Toronto, 1976), pp. 3-21; Donald Macgillivray, "Cape Breton in the 1920s: A Community Besieged", in B.D.Tennyson, ed., *Essays in Cape Breton History* (Windsor, 1973), pp. 49-67; Donald Macgillivray, "Military Aid to the Civil Power: the Cape Breton Experience in the 1920s", *Acadiensis*, III, 2 (Spring 1974), pp. 45-64; Donald Macleod, "Colliers, colliery safety and workplace control: the Nova Scotian experience, 1873 to 1910", *Historical Papers/Communications historiques* (1983), pp. 227-53; Ian McKay, ed., "From Trapper Boy to General Manager: A Story of Brotherly Love and Perseverance", *Labour/Le Travailleur*, IV (1979), pp. 211-40 [reprint of C.W. Lunn's 1905 serialized novel]; Ian McKay, "By Wisdom, Wile or War: The Provincial Workmen's Association and the Struggle for Working-Class Independence in Nova Scotia, 1879-1897", *Labour/Le Travail*, 18 (forthcoming 1986); Del Muise, "The Making of an Industrial Community: Cape Breton Coal Towns, 1867-1900", in Donald Macgillivray and Brian Tennyson, eds., *Cape Breton Historical Essays* (Sydney, 1980), pp. 76-94; Allen Seager, "Minto, New Brunswick: A Study in Class Relations Between the Wars", *Labour/Le Travailleur*, V (1980), pp. 81-132.

history.[8] In general, however, the collection of empirical facts has far outstripped our capacity to understand them or place them in an analytical framework. Enormous as our empirical base now is, crucial hypotheses remain unformulated and untested. For instance, if "isolation" explains the extent of coal-mining radicalism in Cape Breton, why have coal miners been relatively dormant in the past 40 years, when the social gap isolating Cape Breton from Halifax seems as wide as ever? If, as we have been so often told, company control over housing, stores, and local politics drove men to trade unionism and radicalism, why did both the major unions of the coal miners, the Provincial Workmen's Association and the United Mine Workers of America, rise and achieve their greatest initial strength in Springhill, where most of the miners owned their own homes, shopped where they pleased, and voted for town officials independent of the coal company? If material deprivation explains the coal miners' traditions, why did equally deprived and isolated workers (such as merchant seamen or longshoremen or lumber workers) not respond in the same manner? And why do we find such high levels of social and political activism in the period 1890-1920, when coal miners' wages equalled those of many urban skilled workers?[9]

These questions suggest weak points in the "deprivation/isolation" paradigm which has exerted such a hold on academic and popular work on regional coal mining. An alternative framework will require much more comparative theoretical and empirical work, but some of its features can be suggested. The revisionist approach could be described as one of "power/centrality", and its core argument is this: The primary reason for the coal miners' tradition of radicalism and militancy in this region was their structural position within the workplace and within the economy. In the first place, the coal miners were powerful in the workplace because coal mining, which could only proceed if certain basic functions were rigorously fulfilled, had to vest in small groups of workers both routine mining decisions and the ultimate power to close the mine down. It was only within this technologically backward structure that the coal miners could develop their distinctive outlook, within which independence and collectivism were fused. Secondly, the coal miners' strategic position within a society dependent upon coal for its economic life meant that this powerful workplace tradition echoed loudly throughout the region. Indispensability is ever the

8 See, in particular, Kirby Abbott, "The structural transformation of coal mining: a study of the labour process of coal mining in Cape Breton", B.A. Honours essay [Sociology], Saint Mary's University, 1983, and John deRoche, "The Politics of Technology in Cape Breton Coal Mines: A Historical Ethnography", paper presented to the annual meeting of the Canadian Sociology and Anthropology Association, 1985.

9 A pioneering attempt to compare Maritime and Western miners may be consulted in David Jay Bercuson, "Labour Radicalism and the Western Industrial Frontier, 1897-1919", *Canadian Historical Review*, LVIII, 2 (June 1977), pp. 154-75; unfortunately, some of his quantitative procedures and generalizations are questionable.

mother of power, and when the coal miners were indispensable, they acted that way. The miners, at the peak of their power from c.1890 to c.1925, were not truly "isolated"; in fact, as *central* figures within the socio-economic formation, they experienced its stresses and opportunities at first hand; they lived on the front lines of the industrial revolution, and often in communities proud of being progressively "urban". In the early 20th century coal miners were *not* that different than other workers in going on strike; what set them apart was the size and bitterness of their struggles.[10] This approach retains much of the earlier emphasis on the pervasive impact of the mines upon the communities based upon them, the "multiplex" bonds of fraternity which so strengthened the miners in the struggles with the coal companies, and the sheer visibility of class relations in the coalfields. It breaks, however, with the emphasis on "isolation" and homogeneity, and places the relations of coal production in a privileged explanatory position, underlying and determining the significance of all the other "factors" that make up Bulmer's ideal type.[11]

Many of these themes can be found in the abundant empirical work of regional coal-mining historiography. If they are left in their present implicit state, however, the crucial distinctions between the liberal, pluralist premises of the "isolation/deprivation" theory, which construes coal miners' militancy like any other sort of "deviant behavior", and the radical premises of "centrality/power" theory, which sees the coal miners' traditions as a special articulation of very general social conflicts rooted in the mode of production, will continue to be misleadingly blurred. Theoretical choice not only affects the tone of discussion — whether one describes militancy as an "achievement" or a "problem" — but the very formation of questions and the selection of relevant empirical data.

This article explores the mentality of the coal miners in the two distinct coalfields of Cumberland county from 1873 to 1927, the period in which they flourished within industrial capitalism. The major coal-producing area of the Cumberland coal basin has a territorial extent of about 400 square miles. There are two major coalfields, the Joggins (also called the Joggins-Chignecto) coalfield

10 See Ian McKay, "Strikes in the Maritimes, 1901-1914", *Acadiensis*, XIII, 1 (Autumn 1983), for the finding that out of 411 documented Maritime strikes from 1901-1914, while more than half the total striker-days may be attributed to coal miners' strikes, Saint John was the leading regional centre for the number of strikes, and Saint John and Halifax between them accounted for 48 per cent of the total.

11 An approach emphasizing the centrality of the coal miners within the workplace and within the economy also suggests explanations of something that "isolation" cannot explain: the rapid decline of the coal miners as an active force within the labour movement after 1925. The coal miners lost power for three basic reasons: they lost their workplace power, as technology and greatly improved colliery planning separated them from day-to-day mining decisions and lessened their independence; they lost their general economic power, as the coal industry withered and coal was replaced with other fossil fuels; and they lost much of the rank-and-file energy which had fed their earlier militancy, because of the emergence of a system of industrial legality, involving labour legislation and the related growth of a labour bureaucracy.

extending from the Bay of Fundy to Styles Brook, and the Springhill coalfield further to the east. The two coalfields are very different from each other geologically. The seams of the Joggins coalfield tend to be less than four feet thick, while all five major Springhill seams exceed four feet in thickness; the seams of the Joggins coalfield outcrop along a relatively straight band whereas those of Springhill outcrop within a much smaller area; the quality of coal of the Joggins coalfield is inferior for most purposes to that of Springhill; and the Joggins seams dip from 19° at Joggins to 60° at Chignecto, while in Springhill the moderate dip of the major seams (30°) is reduced the further down one goes. Other things being equal, it is economic to drive a mine based upon a coal seam ten feet thick twice as far as a mine based on a seam five feet thick: since a thin-seam mine must go twice as far to produce the same amount of coal as a thick-seam mine, it reaches the point of diminishing returns far earlier. In the real world of the Cumberland coalfields, where the Joggins coalfield was beset with problems of the quality of the coal and the resource ran out beyond a certain depth, while the Springhill coal improved in quality as one went deeper, the tendencies of thin-seam mines to be small and precarious and thick-seam mines to be large and deep, were accentuated.

Coal was mined in this area as early as the 18th century, but such mercantile, coastal operations did not attract a large mining population. Large-scale development awaited the completion of the Intercolonial Railway in 1876; Springhill, serving both the railway and numerous regional industries, became Canada's largest single coal producer in the 1880s, while the mines along the 12-mile outcrop of the Joggins seams languished until completion of a branch line in 1887. Controlled initially by Saint John merchants, the Cumberland coal industry passed in the 1880s and early 1890s to the control of Montreal industrialists and financiers. In the 20th century, the two coalfields diverged radically. Springhill became part of the far-flung empire of Dominion Steel; the Joggins coalfield reverted to small-scale local ownership and a proliferation of tiny mines. The year 1942 marked the high point of coal production; since then both fields have declined to the point that now almost no coal is legally produced in either. The number of coal mine employees rose from 118 in 1871 to 2,482 in 1909, declining to 1,690 by 1927. Of these employees, the Joggins coalfield claimed 21 per cent in the period 1881-1890, 25 per cent in the period 1901-1910, and 43 per cent in the period 1921-1927. According to the manuscript census for 1881, most of the miners were born in the Maritimes; many were of Scottish descent, with a noteworthy Acadian element at Joggins.[12] These coal centres were not in any

12 In 1881, 69 per cent of Springhill's coal mine employees were born in Nova Scotia, 11 per cent were from New Brunswick, ten per cent from England, four per cent from Scotland, three per cent from Ireland, two per cent from France and one per cent from Newfoundland. Men "of Scottish origin", however, accounted for 44 per cent of the coal mine employees, compared with 28 per cent described as being of English origin, 22 per cent of Irish origin, and four per cent of French origin. Turning to the Joggins coalfield, at the same time 71 per cent of the coal mine

sense "closed communities" in this period. Possibly the most basic contrast between the two coalfields was that Springhill was essentially urban, having passed through a brief "frontier" period in the 1880s to emerge as a progressive, modern town; the villages of the Joggins coalfield — Maccan, Chignecto, River Hebert, and Joggins — were emphatically rural, lacking Springhill's municipal services, resident middle class, and concentrated population. Springhill, with a population of only 900 in 1881, grew to 4,813 in 1891, and to 6,355 in 1931; the largest village in the Joggins coalfield in 1921, River Hebert, had only 2,379 inhabitants. Trade unionism, a strong force in Springhill since the foundation of the Provincial Workmen's Association there in 1879, was fiery but far more intermittent in the rural Joggins coalfield.[13]

This article does not attempt a full description of the intricate social history of these coalfields, nor to analyze their remarkable legacies of labour activism and workers' control. It focuses, instead, on the coal miners' underlying outlook. It seeks first to establish the basic structures of coal mining and suggest the strategic implications of these structures for coal miners. It then documents the emergence of a distinctive mining outlook, first by looking at the theme of the collective traditions of pit boys, and then by analyzing the outlook of independence of the colliers. It finally explores the ramifications of this mining outlook for society, taking as its theme the impact of pit deaths on the community. Its focus is on the "elementary forms of mining life", and this emphasis may allow us to come away from the study of one small group of coal miners with new questions for regional coal-mining history.

There can be no better way to provoke a clash of interpretations than to ask the simple question, "Why did men continue mining?" For isolation theory, and for many external socialist critics, only the complete absence of alternatives could explain why anyone would work in coal mines, these dank, dark, and dangerous holes in the ground. The historian who brings this wholly negative image of the mine to the subject will be startled to find a quite different appraisal offered by the workers who knew the mines best. The coal mine, as described by many coal miners, even those bearing the visible and invisible scars of mining life, was an intricate and fascinating place, where they formed their closest

. employees were born in Nova Scotia, 15 per cent in New Brunswick, six per cent each in Ireland and England, and three per cent in Scotland. The proportion of men listing French as their origin rose from 20 per cent in 1871 to 35 per cent in 1881. Following this early period, two significant movements of immigrants can be discerned, one from Britain from 1880-1890 to Springhill, and a second to both coalfields (but mostly affecting Joggins) from Britain and continental Europe from 1901-1909.

13 For more details on the economic and social history of the coalfields outlined in these two paragraphs, see Ian McKay, "Industry, Work and Community", Chapters One to Four; M.J. Copeland, *Coalfields West Half Cumberland County Nova Scotia* [Geological Survey of Canada, Memoir 298] (Ottawa, 1958). For a short popular survey, see Hope V. Harrison, "The Life and Death of the Cumberland Coal Mines", *Nova Scotia Historical Review*, Vol. V, No. 1 (1985), pp. 73-83.

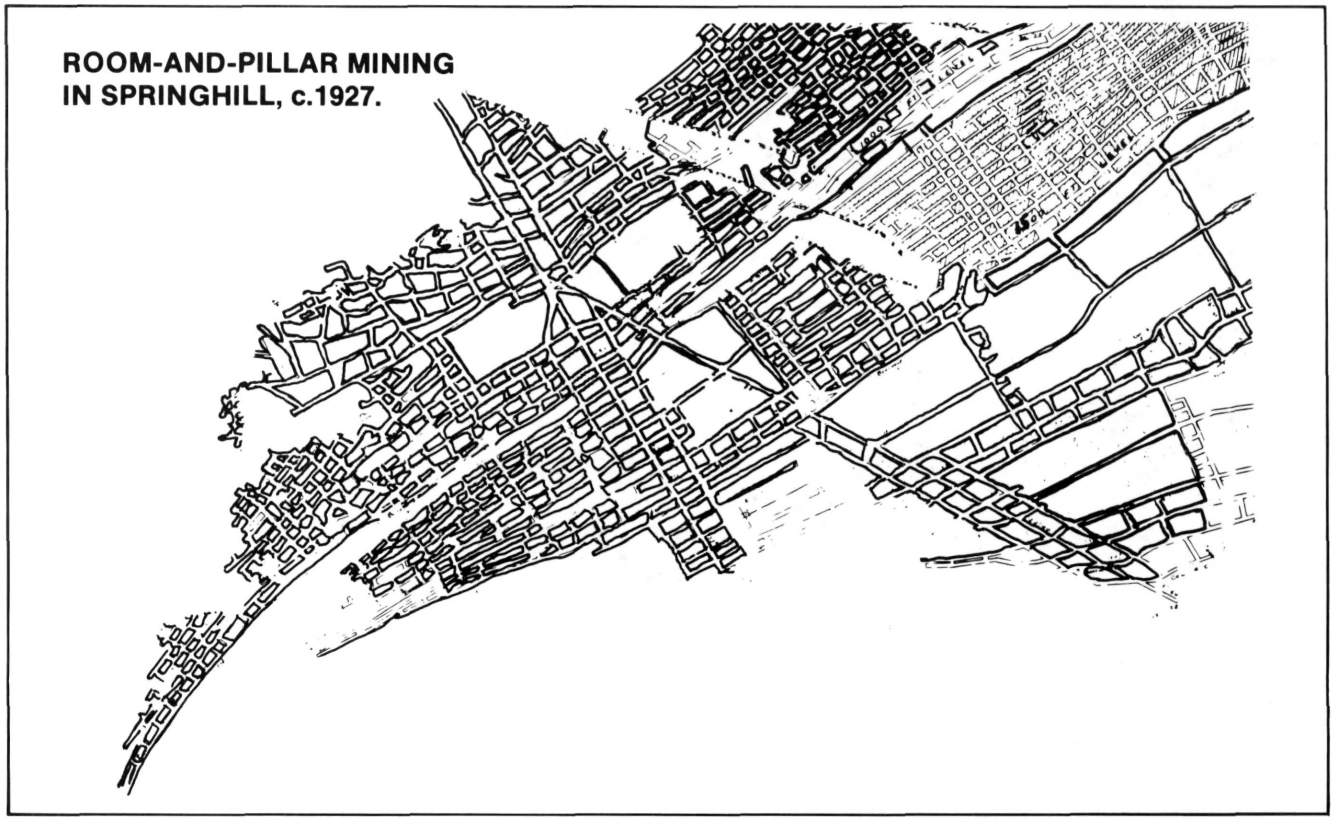
friendships and to which they would be happy to return. Many tried other jobs, which they compared unfavourably to employment in the mines; others took up coal mining after working as farmers, and expressed a strong preference for working underground to farm work. They preferred mining even to readily available industrial alternatives and expressed a willingness to go mining again. Even if we make allowance both for the understandable nostalgia of men for earlier days, and for the shocked incomprehension of hostile outsiders, there is simply no reconciling these very different assessments.[14]

The only way of going beyond favourable or unfavourable stereotypes of mining life is to explore the mine as both an objective structure and as the nucleus of a distinctive outlook. For the coal mine was never just the crude, dark hole depicted by its hostile critics: it was a dynamic machine for winning coal, a moving complex of systems — those of production, transportation, distribution, maintenance and management — each one of which was required for the functioning of the whole. At least partly because of this complex interplay of systems, which 19th-century mining science lacked the capacity to monitor, let alone revolutionize, men in the mine relied more upon precedent and tradition than upon precise planning and innovation. A good deal of the "history of the mine" was made "behind their backs", not by "nature", but by "historical-natural structures", reflecting the unintended consequences of human decisions as these were passed down from mining generation to mining generation. This was consequently the most historical of workplaces.

Coal mines were structured according to two basic mining methods. Bord-and-pillar mining (Figure One) consisted of driving a series of parallel roads through the coal and connecting them at intervals by roads driven at right angles. Longwall mining (Figure Two) was a radically different approach in that the whole of the face of the seam was worked simultaneously, either outwards from the main slope ("longwall advancing") or, after roads had been driven to

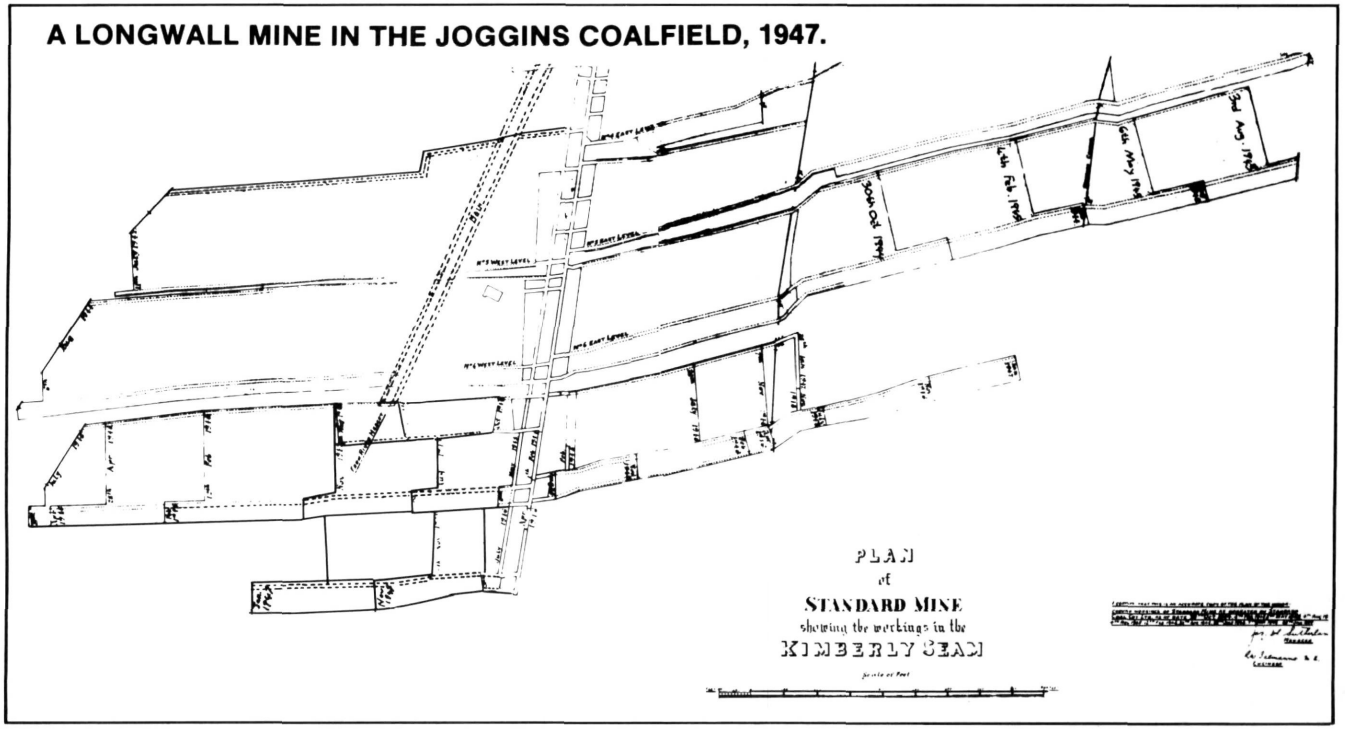
14 The oral testimony on which this article is partly based was collected in taped interviews in 1979 with 92 participants in the Cumberland coal industry. These tapes are now housed at the Dalhousie University Archives, along with typed partial transcripts filed according to whether they pertain to the Springhill or Joggins coalfields. References to this oral material are given from the pages of the transcript. My thanks to the many individuals who shared their memories with me. For favourable assessments of coal mining, see Transcripts, Springhill, pp. 113, 168. The trade union minutes upon which this paper is equally dependent are divided between three institutions. At the Angus L. Macdonald Library, St. Francis Xavier University, Antigonish: Minutes of Pioneer Lodge No. 1, Provincial Workmen's Association, 1882-1886, 1899-1901, Minutes of the Dominion Coal Company Employees and the Springhill local of the Amalgamated Mine Workers of Nova Scotia (1917-1918), and the Minutes of the United Mine Workers of America, Local Union 4514, 1923-1927. At Dalhousie University Archives, Halifax: Minutes of Holdfast Lodge of the Provincial Workmen's Association, Joggins, 1894-1906; At the Springhill Miners' Museum, Springhill: Minutes of Local 4514, United Mine Workers of America, 1921-1923. In the following pages these minutes are referred to simply by location and date. (For instance, Joggins Minutes, 1 September 1895, refers to the entry of this date in the Minutes of Holdfast Lodge of the PWA, held by Dalhousie University Archives).

Figure One



NO. 6 MINE, SPRINGHILL. THIS MINE HAD BOTH ROOMS AND BORDS. THE SHADED AREA INDICATES THAT THE PILLARS HERE HAVE BEEN REMOVED. THOSE ON THE TOP LEVEL ARE MAINTAINED FOR ADDITIONAL ROOF SUPPORT. NOTE THE TWO PARALLEL PASSAGES (THE HOISTING SLOPE AND FANWAY). SCALE: 1" = 400.' COPIED FROM A MAP IN THE COLLECTION OF THE DEPARTMENT OF MINES.

Figure Two



A PART OF A PLAN OF THE STANDARD MINE ON THE KIMBERLY SEAM.
A mine demonstrating longwall methods. Pillars are left to guard the two parallel passages in the centre of the mine-the main slope and the airway. The straight lines and dates indicate the position of the walls on a given date. The dates on the walls on the bottom left indicate "longwall advancing," later dates being recorded the further one moves from the main slope. From a map in the collection of The Department of Mines.

the boundary, by working back to the main slope ("longwall retreating").

The actual production of coal was entrusted, in traditional bord-and-pillar mines, to a team of two miners responsible for their "place" (or bord). In the 19th century this team often employed a loader. The first task of the team was that of undercutting the coal seam (the "mining" of coal, strictly speaking), which was done by cutting at the bottom of the seam to a depth of about three or four feet. Then a hole was drilled in the coal face with an auger, gunpowder was placed in it, and the coal was blasted down. The coal lumps thus produced were loaded into a mine car (or "box").

Once the coal was put in the coal car, it entered the transportation system. There were two components to this system, haulage (i.e., transportation of coal through the mine), and hoisting (i.e., transportation of coal from the mine to the surface). Once the coal cars were brought to the bottom of the slope by a horse driven by a young driver, the cars were made up into train (or "rake") by a bottomer. The transportation system also was responsible for getting men to and from the coal face. When the coal reached the mine's surface facilities (the "bankhead"), it was prepared for market in the distribution system. This entailed the screening of coal to remove stone and other impurities, the sorting of the coal by size, the loading of coal cars, and other work on the often extensive mine railways.

These three interconnected systems handled stages in the production of coal, and represented aspects of the same task of getting the coal from the coal face to the market. The remaining two systems were not directly connected to getting out the coal. The maintenance system included ventilation and pumps, and the specialized workers (bratticemen, trapper boys, examiners, engineers, and so on) responsible for them. Ventilation meant removing noxious gases from the pit by guiding an undivided and strong current of air through the working places of the mine by such devices as ventilation doors and bratticing (light wooden frames with canvas attached). Pumping out water was also an essential maintenance function. Mines waged a constant battle against water, and if left alone would flood (as the lowest levels did when maintenance workers joined a Springhill miners' strike in 1890).

The management system was in many respects the least vital to the day-to-day working of the mine, although it was crucial to its long-term evolution. In the early 19th century the general manager was the man who looked after marketing, engineering, safety, labour negotiations, and every other aspect of the business. Gradually the increasing size of the mines meant that a specialized body of men assumed these various functions. Managers not only answered to the coal companies, but were also responsible, under mining law, for setting special rules in the pit and ensuring its safety. In Springhill "the superintendent" was supposed to set general policies for the colliery, "the general manager" to carry out these general policies, and the "underground managers" at each of the

three main slopes directly to supervise the work.[15]

Already we have gone a long distance from the "dark hole in the ground" to a view of the mine as a structure of interlocking systems. What characterized each of these systems, and their interaction, was fragility. Ventilation of the mines, for one example, was as uncertain as it was indispensible. In the last analysis the business of mining, this crude and muscular business of digging coal from the earth, depended on something as fugitive and intangible as a properly guided gust of air. A misplaced brattice, an open door, a damaged fan: these minor defects could bring production to a halt or lead to a dangerous build-up of gas. This brutally physical environment — echoing with the harsh noises of coal cars, explosive charges, and the sounds of mining machinery — ultimately relied upon a few very fragile arrangements, and upon the workers who carried them out.

Coal-mining technology in Cumberland County evolved slowly; there was no decisive innovation through which they were modernized. Three important general changes were a general transition from bord-and-pillar to longwall, the adoption of compressed air and electricity, and the transition from shallow to deep mines.

Of these general changes, that from bord-and-pillar to longwall was probably the most important. In principle, longwall was a better mining method than bord-and-pillar. In the former system a regular succession of varied operations took place within a short time and the tonnage in each place was relatively small. In longwall, where practically all the coal was removed, a larger number of men could be employed for a given length of face, and labour costs could be reduced because mining machinery would improve productivity. It was the sharp rise in wages at the beginning of the 20th century that gave rise to a sudden interest in longwall techniques. (There were additional advantages: easier ventilation, better control over roof subsidence, greater opportunity for systematic planning). Thin-seam mines were particularly suited to longwall, because they needed to extract the highest possible percentage of coal in order to keep running, while Springhill, with its thicker seams and absence of a good waste material for stowing in the mined-out areas, seemed less suited to the new method. Often somewhat tenuous parallels are drawn between the coming of longwall in mining and mass-production techniques in factories. With loading techniques which remained (as one mining man put it) as they had been "in the days of the Duke of York", and with a number of other serious obstacles to mechanization, longwall in itself did not revolutionize production. In fact, in

15 For excellent general descriptions of mining, see Caleb Pamely, *The Colliery Manager's Handbook* (New York and London, 1904); H. Stanley Jevons, *The British Coal Trade* (Newton Abbot, 1969 [1915]); Herbert W. Hughes, *Text-Book of Coal-Mining, For the Use of Colliery Managers and Others* (London, 1904); Frank Kneeland, *Getting Out the Coal* (New York, 1926); Keith Dix, *Work Relations*; Sir Andrew Bryan, "Coal Mining", in Trevor I. Williams, ed., *A History of Technology, Vol. VI, The Twentieth Century c. 1900 to c. 1950* (Oxford, 1978), pp. 360-1.

Cumberland County, it had effects far different than one might expect. Longwall and machine mining preserved the tiny collieries of the Joggins field and allowed them to persist as atypical islands of petit-bourgeois ownership in a sea of monopoly capital. In these rural mines, mechanization also meant the domination of the colliery workforce by the colliers, and a much lower percentage of ancillary workers. Conversely, because powder had been banned in the largest Springhill mine, No. 2, longwall, introduced in 1924 as a solution to underground "bumps" (coal bursts), coexisted with the old-fashioned handpick and handloading. In neither case did it represent the "scientific revolution" in coal mining for which the Mining Society of Nova Scotia had long hoped.[16]

A further general change affecting the mines of Cumberland County was the increasing depth of the mines. In 1866 the deepest coal mine in the region was 210 feet; the deepest mine in Cumberland County, the Victoria Colliery, had attained a depth of 135 feet. By 1927, the main slope of the deepest mine in the county, No. 2 in Springhill, was 7,580 feet long, or 36 times as deep. The Springhill mine would go on to become one of the deepest slope mines in the world. Increasing depth meant that even impressive improvements in labour productivity could be offset by the disadvantages of mining at depth, which required so many more ancillary workers. By the 1890s, managers were forced to wonder, with William Blakemore, whether there was an economic limit to the output of a coal mine: whether, because of the augmented depth and extent of coal mines, the expense of haulage and hoisting would start to outweigh the revenues received from coal. Reinvestment of profits in new mining technology was more difficult precisely at the point it was most necessary.[17]

Excluding management, the four other systems of the coal mines each changed in this period but each in a strikingly hesitant and incomplete manner. The production process was slowly changed, but Cumberland County differed from Cape Breton and from the province as a whole, in the nature and timing of mechanization. The Joggins mines, with their thin seams and abundant supply of electricity, had been the first in Nova Scotia to experiment with percussive

16 Harrison F. Bullman, "Longwall Working, With Special Reference to the Arrangement of Labour", *The Colliery Engineer* (September 1888), pp. 27-9; W.E. Lishman, "Coal Mining Methods in Nova Scotia", *Transactions of the Mining Society of Nova Scotia*, X (1905-1906), pp. 60-5; Macleod, "Mining Reform", Chapter Six; J.G. Rutherford, "Modifications of Working Coal Lately Introduced in Nova Scotia. I. Pictou County", *Transactions of the Mining Society of Nova Scotia*, Vol. I, Part IV (1892-1893), pp. 47-53; James Baird, "Modifications of Working Coal Lately Introduced in Nova Scotia. III. Joggins, Cumberland County, N.S.", *Transactions of the Mining Society of Nova Scotia*, Vol. I, Part IV (1892-1893), pp. 55-7; George S. Rice, *Occurrence of Bumps in the Springhill No. 2 Mine of the Dominion Coal Company* (Halifax, 1925).

17 Arthur Taylor, "Labour Productivity and Technological Innovation in the British Coal Industry, 1850-1914", *Economic History Review*, XIV, 1 (1961), pp. 48-67; Nova Scotia, *Annual Report on the Mines* [*Mines Report*], 1866-1927; William Blakemore, "Is there an Economic Limit to the Output of a Coal Mine?", *Transactions of the Canadian Mining Institute*, Vol. I, No. 1(1895), pp. 257-62.

mining machines in the 1880s and continued to lead the way with coal-mining machinery up to the First World War. Springhill, impeded by the threat of explosion and steeply-inclined coal seams, adopted mining machines only in 1921, and then only in two smaller mines, No. 6 and No. 7. Because of the banning of powder, Springhill's largest and most productive mine remained at a most archaic level of technology, with as much emphasis on the dexterity of the colliers as had existed five decades before.[18]

Transportation also evolved slowly, although in this case fairly completely, from a system once wholly dependent upon horses and juvenile drivers to one relying upon haulage engines and adult workers. Only after the First World War did the Dominion Coal Company (in general far more advanced in expertise than the independent Cumberland Railway and Coal Company) mechanize Springhill's haulage system. Before then, as we learn from the remarkable letters of Henry Swift, the general manager at Springhill, the transportation system broke down with distressing frequency. "Of all tracks about a Colliery I always look upon the slope track as the Most important", he wrote to his superintendent, J.R. Cowans. "It is a most painfull duty to stand in the bankhead and listen to raps of rakes up and down, everyone idle, and when the report comes 'an rake of[f] the track', a very *familiar expression*". American studies confirmed Swift's empirical impression that inefficiencies in transportation made a crucial contribution to low levels of productivity. More rapid progress was made in modifying the bankheads, although, as Albert Dawes observed in the case of Cape Breton, "the number of men employed on all the various operations involved in handling the coal from...pit bank to railroad cars is very high; and the all round mechanical efficiency is extremely low".[19]

Although coal mines were plainly the backwater of the movement for scientific management, there were some changes in the internal structure of the workforce. Once the largest single category, the skilled colliers underwent a sharp decline throughout the province in the First World War; "other underground workers", ancillary men employed in haulage, construction, and maintenance subsequently made up the most numerous category. The pits of Cumberland County were somewhat exceptional, particularly those of the Joggins coalfield, where colliers continued to predominate. Springhill followed more closely the provincial pattern, as the collier's numerical position grew somewhat weaker and his job less all-encompassing. His craft was split up into a number of specialized functions and parcelled out to other groups of workers — who were gener-

18 *Mines Report* (1882), p. 27; J.F. Kellock Brown, "Longwall Machine Mining", *Transactions of the Mining Society of Nova Scotia*, XIX (1914), pp. 164-87; Rice, *Occurrence of Bumps*.

19 Henry Swift to J.R. Cowans, 31 January 1890, Letterbooks of Henry Swift, 1889-1891, Vol. 35, RG21, Series "A", Mines and Minerals, PANS [Swift Letterbooks]; Hugh Archbald, *The Four Hour Day in Coal* (New York, 1923), p. 61; Albert Dawes, "The New Coal Raising and Screening Arrangements at Jubilee Colliery, Sydney Mines, N.S.", *Transactions of the Canadian Institute of Mining and Metallurgy and of the Mining Society of Nova Scotia*, XXIV (1921), p. 299.

ally directly employed by the company and paid a daily wage, rather than working on contract and being paid according to output, as were most colliers. In the Cumberland County mines of the 1860s, skilled colliers made up more than half the workforce (124 in 1866); in Springhill by 1926 they were a minority of the 1,032 employees and even outnumbered in the underground by 449 to 344, while in the coal mines of the Maritime Coal and Railway Company in the Joggins Coalfield the 226 colliers comprised 70 per cent of the total workforce. This reminds us of the stark contrasts between the two coalfields, and the complexity of mining history: for the Joggins colliers were also the most mechanized, while their Springhill counterparts generally worked with the handpick.

The mining workforce that isolation theory saw as being relatively homogeneous was in fact split up into a bewildering variety of specialties. For one mine in Springhill in 1901, we find, in addition to 422 contract miners and 18 officials, no fewer than 32 separate underground job categories. Improvements in productivity made in the 19th century were followed by sluggish improvements in the 20th; in 1927 the mine in Springhill produced at a rate of 1.64 tons per day per employee, little better than its performance in 1898. Campaigns for the scientific overhaul of coal mines united engineers, capitalists, and even trade unionists, and did achieve victories on the surface, in communications, and in safety; they petered out, however, when it came to the complete overhaul of underground work. The "frontier of control", the frontier marking the boundary between what management could plan and what workers continued to control, remained obstinately in place, somewhere between slope bottom and the working face.[20]

This brings us to the fifth and least developed system of the mines, that of management, caught between at least two paralyzing crossfires. One of these was that managers, legally responsible to the state for the safety of the mines, were no less answerable to mine owners for mining profits. Another was, as mining expert Hugh Archbald pointed out, that managers were supposed to do two things which required diametrically opposite conditions — engineering, which required concentration and sitting still, and supervision, which required constant movement, especially in coal mines such as Springhill's, with its widely scattered underground workforce. Although gradually more specialized management structures emerged, particularly after the arrival of the Dominion Coal Company, for the greatest part of this period the manager looked after the daily mining operations, from handling workers' grievances to planning new pumps. For all the scientific collection of statistics and serious engineering work they undertook, managers could not dominate the conduct of underground work. It was simply too scattered, too tradition-bound, too complicated. And so, within an industry essential to the industrial revolution, various groups of irreplaceable

20 On the structure of the workforce and productivity, see McKay, "Industry, Work and Community", Chapter Five; Cumberland Railway and Coal Company, Time Books, 1891, 1901, 1908, Springhill Miners' Museum, Springhill.

workers — colliers, drivers, trapper boys, surface workers, railwaymen — could take advantage of their indispensability within the system to press their demands. Even with the help of a growing staff of officials (one for every 140 contract miners in 1891, and for every 20 contract miners in 1908, in Springhill), no person could possibly have directed daily mining operations in a thorough way, especially given the rudimentary character of the mine's communication network.[21]

The letters of Henry Swift, the general manager of Springhill from 5 March 1890 to 20 February 1891, reveal just how contradictory and difficult it was to conduct the unruly orchestra of the mine. Swift is fascinating because he genuinely wanted to change the mines from top to bottom. His failure to do so illuminated the forces which preserved them as complex havens of relatively autonomous workmen. Swift was devoted to the ideal of the professional mining manager; he subscribed to professional journals, participated in the Mining Society, wrote an impressive 25-page inventory of all the physical assets of the company, and dealt brusquely with time-honoured workplace traditions which did not live up to his ideal of efficiency. Some of his far-reaching reforms actually worked. Springhill became renowned for the systematic reports required of its officials and the promotion of coal miners and officials on the basis of merit. Where his programme failed was where it really mattered: the transformation of mining work itself. Confronted with the rule-of-thumb empiricism which had long been the "spontaneous philosophy" of the pit, he responded with notices, rules, bureaucratic order. "What we want about the Colliery is a good Code of Rules", he wrote on 20 January 1890. "Regulations for the guidance of all parties and these strictly enforced". He ruthlessly mocked the customary manner in which mining decisions had been made: "This I told you and you told me and I told somebody else, and when anything happens everyone is looking around for a loop hole to Crawl in...".

Nobody tried harder than Swift to make this working environment over into something like a disciplined factory operation. He was beaten by the miners, who, incensed at their loss of time-honoured customs, won an important strike in 1890. More significantly for our purposes, however, he was also beaten by the mine itself. Walking endlessly, often an exhausting five miles a day through the mine, faced with communication devices which were (so he bluntly told his boss) "no Credit on the Management", he found himself in incessant conflict with his workers and his superintendent. "I am not guilty of disobedience", he protested when accused of overstepping his authority, "and Never was[,] and don't allow it if I know [.] It has always been my aim to give the fullest information on any Matters of importance in my reports...". He faced daunting problems of flooding, gas, frequent derailments, and unruly workers. Swift was inescapably trapped in an environment that would long be the despair of rational, top-down

21 Archbald, *The Four Hour Day*, p. 47; Cumberland Railway and Coal Company, Time Books, 1891, 1908.

planners, where workers made up their own minds about a large number of mining operations, and where natural events could undo the most complex plans. It was small wonder he found his position stressful. "My Mind is at all times fully occupied with thoughts to Make the Work a Success", he wrote forlornly on 11 November 1890, "enough of worry to Kill a man".[22]

What weighed so heavily upon Swift and ultimately doomed his programme was not just the formidable technical problems of mining: it was the weight of past history. Swift, a resolute rationalist, was fighting his battle within an environment that was paradoxically both uniquely *historical* and uniquely *contingent*. This was the contradiction neither he nor any other mining reformers could solve. Mines never escaped their early history. Once set in place, they could not be moved; once laid out, they could only with enormous difficulty be redesigned. In 1925 the planners of Springhill's mines were still complaining about the high costs they had to pay for short-sighted decisions taken in 1873.[23] This pattern pertained not only to mining structures but to mining men, governed more by historically-sanctioned tradition, précedent, the "common law" of the pit, than by abstract schemes and formal rules. In both its natural and social aspects, the mine was far more than a mere workplace. It was a dynamic force, even a dynamic tradition, greater than the sum of the individuals found within it: a structure dependent upon the integration of its five key systems, but also on the historical precedents its very longevity encouraged.

The dynamism of this structure was never more clearly in evidence than in its moments of crisis. One can certainly read the record of the great Springhill Explosion of 1891 — the worst mine disaster in regional history — as a confirmation of how oppressive and dangerous mining could be. But it is perhaps even more revealing as a moment of systemic malfunction, which revealed how everyone in the mine was dependent on an exceedingly fragile and precarious integration of functions. In the East Slope in Springhill, at 12:43 p.m. on 21 February 1891, the mine workers were startled by a loud roar. There was a sudden storm of wind and flame. Eyewitnesses would later describe the force of the wind, "which swept like a tornado through the dark passages, hurling timbers and clouds of dust and flying missiles before it". Then came the balls of fire, of varying sizes, and finally "a solid body of fierce flame that filled the passages, and literally roasted everything in its path". One survivor of the explosion who worked in another part of the mine, recalled "a terrific gale of wind followed by another and heavier gale which carried along with it pieces of rock, timber and coal with a tremendous force. He was knocked down, but on rising and opening his eyes he saw that the whole slope was in a flame". Making his

22 Swift to Cowans, 29 January, 31 January, 15 February, 20 January 1890, Swift Letterbooks; *Maritime Mining Record* (Stellarton), 20 March 1901; Swift to Cowans, 11 November 1890, Swift Letterbooks.

23 Royal Commision on Coal Mines, Nova Scotia, 1925, "Minutes of Testimony", p. 4061, Microfilm, PANS.

way as best he could out of the mine, he noted everything around him had been twisted and turned in all directions.[24]

Men close to the explosion were burned to death; others faced different perils. The East and West Slopes of the Springhill mine were connected by a tunnel, and the force of the explosion and the deadly effects of gas soon spread to the West Slope. There, on the 1,300-foot level, near the tunnel to the East Slope, the bodies of 20 men were later found lying on their faces, their safety lamps in their hands, marking the last point they had reached in a race for life. "Most of the dead", H.A. McKnight reported, "were in the attitude of making violent efforts to escape, when they became rigid under the influence of the poison which they inhaled". A total of 125 men and boys were killed. A visiting manager from Drummond Colliery in Pictou County remarked that never before had he seen an explosion attended with so great a loss of life and so little damage to the mines. At the inquest it was determined that the most probable course of events was that a shot of powder, placed in the coal to bring it down, had been inadvertently fired with too much powder, so that a flame from the shot ignited a mixture of coal dust and a certain portion of gas. The finding was significant, because it led to a new appreciation of the contribution of coal dust in explosions, and to new legislation banning powder in gaseous mines.[25]

For all the depth of its history, for all the tenacity with which its workers clung to protective and humane traditions, the mine offered no certainty. The past was everywhere, in entrenched workplace traditions, indeed embedded in the very architecture of the mine, but where was the future? How could even a conscientious manager master the future of the mine when so much of its history was made "behind men's backs", when so many things about it were uncertain? No one could have tried harder than Swift. When a miner inadvertently destroyed the effectiveness of the ventilation system by failing to replace a board, Swift noted angrily that "Had the Gas Got ignited it would have blown down this skipping board destroyed all the evidence of the Real cause and would have been attributed to some mysterious freak in nature *or Coal dust*". In the interests of safety, he was quite willing to impose closed lights in the pit, even though miners complained loudly about the reduction in their earning power resulting from decreased visibility. To encourage interest in mine safety Swift presented to the union, Pioneer Lodge of the Provincial Workmen's Association, a book entitled *Prevention of Explosions and Accidents in Coal Mines.* Yet fired-out shots were common and the requirement that places be tested before shots were fired was not rigorously enforced.[26]

24 H.A. McKnight, *The Great Colliery Explosion at Springhill, Nova Scotia, February 21, 1891* (Springhill, n.d. [1891]), p. 7; *Amherst Evening Press*, 23 February 1891.

25 McKnight, *Explosion*, p. 10; R.A.H. Morrow, *Story of the Springhill Disaster: Comprising a Full and Authentic Account of the Great Coal Mining Explosion at Springhill Mines, Nova Scotia February 21st, 1891* (Saint John, 1891), p. 110.

26 Swift to Cowans, 5 February 1890, 13 June 1890, Swift Letterbooks; *Trades Journal* [Stellar-

This working environment was always poised precariously on the very edge of catastrophe. Thomas Cantley of Nova Scotia Steel put it well when he remarked, "The contingencies of mining certainly keep us on the ragged edge". A brief prepared by the Cumberland Railway and Coal Company echoed this lament: "The contingent account in mining is never closed". Henry Swift, however, unwittingly put it better than anyone, when on 20 February 1891 he closed his daily letter to the superintendent of the Springhill mines with the words, "All in order So far as I know". These were his last written words: he died the next day in the Great Explosion.[27]

To suggest that the mine was the vital nucleus of the miners' distinctive outlook is to risk accusations of "reductionism" or "economism" by those who, preoccupied with the re-enactment of "lived experience", see objective structures only as loosely defined "limits" to the free play of consciousness. To refuse, on the other hand, to go beyond a structural approach to coal mining to the practice and consciousness of the miners is to fall into the "fetishism of social laws".[28] Less abstractly, if one sees it as a problem that coal-mining families would deliver up their sons to the mine, generation after generation, then the first-order "explanations" provided by "lived experience" ("it's in the blood", "it was just our way of life", "fatalism", "traditionalism", etc.) restate precisely the problem with which one began. If, on the other hand, one embraces the typical determinism of popular historiography, which dwells so insistently on all the evils of coal-mining life — poverty, company control, fatalities, and so on — one is left not only wondering why radicalism was not a constant among these workers, but also with a mechanical interpretation of class consciousness emerging from this material base with the stale regularity of exhaust fumes from an engine.

In contrast, our approach to the coal miners' consciousness begins by postulating a dialectic of socio-economic structures and structuring dispositions. A particular class of material conditions of existence entails a particular structure of objective probabilities and, in turn, a structured disposition towards the future. Only if we analyze the structured collective outlook, a system of durable, transposable dispositions (the "habitus", in the language of sociologist Pierre Bourdieu, whose thought we are following here), can we understand the practice of the coal miners not as acts in the realm of collective freedom, nor as acts made necessary and automatic by the very structure of the coal mines, but as

ton], 18 February 1891; William Hall to Edwin Gilpin, 19 July 1889, Vol. 9, RG21, Series "A", PANS.

27 Record of Proceedings, Rex vs. Cowans and Dick, Record of Proceedings, Exhibit H/82, Thomas Cantley to J.R. Cowans, 22 November 1906, Vol. 328, Series "A", RG21, PANS; *Labour Gazette* (August 1909), p. 209; Swift to Cowans, 20 February 1891, Swift Letterbooks.

28 Pierre Bourdieu, *Outline of a Theory of Practice* (London, 1977), p. 84. See also the discussion in Jeffrey C. Alexander, *Theoretical Logic in Sociology. Vol. I Positivism, Presuppositions and Current Controversies* (Berkeley, 1982).

strategies of survival emanating from a structured and collective outlook, based upon an immanent law laid down in each agent by his earliest upbringing and powerfully reinforced throughout his mining career. As the *modus operandi* informing all thought and action, this mining outlook — which is our imperfect translation of *habitus* — made possible a spontaneous co-ordination of practices in response to the daily emergencies of mining life.

The existence of this collective outlook has been attested to since the mid-19th century, but because of an understandable initial focus on the miners' most radical period, it is easily confused with class consciousness. But the mining outlook and class consciousness are separate phenomena, and falsely to "politicize" this outlook is to impose too simple a schema upon a complex and intricate social history. It is clear, for example, that the "solidaristic" outlook characteristic of the coal miners was shared by many company officials, who spoke, dressed, and thought in much the same manner as those they supervised, even though they were objectively in a far different position. And it is equally clear that coal miners often refused to draw from their own lived experience the socialist conclusions of many historians. This is not to deny the importance of the coal miners' socialism, nor that such socialism could be powerfully reinforced by the vivid sense of occupational distinctiveness. But the coal miners' distinctive identity could as easily fuel a populist movement against the city (for example, a hostility to "Halifax" on the part of "Cape Breton"), or even a strongly protectionist sentiment against other workers, even other coal miners who sought work in the mines. Child labour, wretched housing, high fatality rates, profiteering by absentee companies did not mechanically and automatically lead, in the coalfields or elsewhere, to class consciousness. Had they done so, the social history of the entire region would be far different.

This mining outlook can be summed up in a phrase: collectivism and independence. As one miner from River Hebert remarks, "No individual works in a coal mine. You're all together down there".[29] Within the mine the individual, relying upon his fellow workers for his economic and physical survival, subordinated himself not only to the rhythms of the mine but also to the collective traditions of his fellow miners. The strength of such collective traditions of mutual aid would startle outsiders when they surfaced, without warning, in disasters or strikes: what was startling was not just a suddenly visible "group mind" but its relative independence from the expectations of bourgeois society. The economic centrality of coal and the objective interdependence of mining functions formed the key to the coal miners' *habitus*. This durably installed capacity engendered thoughts, perceptions, expressions, and actions, by which the mine could be reproduced each day as a site of labour and the mining tradition preserved year after year as a code of manly conduct.

This outlook was laid down in childhood, and could not have survived without the active labour of women, who had the sole responsibility of guiding the day-

29 Transcripts, Joggins, p. 61.

to-day activities of the mining family. Writing the history of the family in the region's coalfields is an urgent task awaiting regional social history, but at least some basic features can be suggested. Women were excluded from production, and, apart from the few non-mining domestic and service jobs, they were restricted to working as housewives. Since the coal miners had proverbially large families, the domestic routine of women was extremely demanding. Rising at 4 a.m. to get the fires on, preparing food for the miner's lunch, superintending the shopping, looking after small children, trying to curb the coal-dust which settled so determinedly upon floors, ceilings and clothing, washing the miner's clothes, making his supper, and in the evening sewing or participating in voluntary activities: it was a schedule as disciplined and demanding as that of the miners. One miner suggests the extent of women's work in the mining environment: "Look, I don't know what you'd call her [his mother]. She cuts my hair, she used to half sew my shoes, she used to make my clothes. I don't know if she's a tailor, a shoemaker, or what she was — or a breadmaker. You had a big family and that's what you had to do in those days". Some measure of the wife's responsibility emerges from the testimony of Elisha Paul before the Labour Commission in 1888: "I let my wife manage the house and buy things, and I don't know much about that business". J.B. McLachlan was right to describe the wives of miners as their "financiers", responsible for many crucial decisions that shaped the mining households. Women provided the backbone of the communities' social and religious life; coal miners who left for the West during strikes could rely on their wives to maintain the household in their absence.[30]

The essential contribution of women should not conceal, however, their exclusion from (and dependence upon) the mine and the very masculine outlook which emerged from it. Many women report their frustration at living on the surface, never or rarely allowed a glimpse of their husbands' working reality, and their corresponding exclusion from the specialized language, "pit talk", in which the miners discussed their work. The boys, from their earliest experiences in the family, were moulded by families in which the development of an individual sexual identity and that of a collective occupational identity were deeply connected and mutually reinforcing. From 1883 to 1910 boys were very numerous in the mines, accounting for about 16 per cent of the Cumberland work-

30 The average size of families headed by miners in Springhill in 1881 was 5.83. No attempt can be made here to ground the impression of large mining families comparatively: for a discussion on this subject, see Michael R. Haines, *Fertility and Occupation: Coal Mining Populations in the Nineteenth and Early Twentieth Centuries in Europe and America* (Ithaca, N.Y.) [Western Societies Programme Occasional Paper No. 3, 1975]. See also Transcripts, Springhill, p. 112; *Nova Scotia Evidence*, p. 272; David Frank, "The Miner's Financier". Transcripts, Springhill, p. 88, state: "Most of the women kept control over the money because the men were on different shifts and they weren't home to pay for anything, so the man would come home with the envelope and he'd give it to the woman. As a rule". For a stimulating analysis of the history of the family under industrial capitalism, see Bettina Bradbury, "The Working Class Family Economy: Montreal, 1861-1881", Ph.D. thesis, Concordia University, 1984.

force in an average year in the 1880s, 10 per cent in the 1890s, and 9 per cent in the early 20th centuries. In absolute numbers, the children were most numerous in 1908, when no fewer than 302 boys found work in the Cumberland coal mines — 176 underground and 44 on the surface in Springhill, 66 underground and 16 on the surface in the various small mines of the Joggins coalfield. Childhood was shortened, and the transition to manhood drastically reduced to a year or so, a fact dramatized by the coal miners' stories of boys starting work still believing in Santa Claus.[31]

Indirectly influenced by the mine from their youngest years, most boys (at least until 1910) were expected to go to work in the pit at the earliest legal opportunity. It was, for at least some mining families, a wrenching decision, one place in which mining novels ring true to life, although novels typically stress the opposition of mothers, and oral history records the opposition of many fathers. This question reflected the deep ambivalence that miners felt towards their own work. There were striking parallels between miners and other skilled craftsmen, but this hesitation to initiate their sons into the mine set them apart. One boy, from a family of eight, went out to work to help his family get by, but over the opposition of his father. He got on by lying about his age. On the second day of his work in the mine, he saw two dead miners being taken from the pit while he went to work. When he got home, his mother asked him, "Now don't you think you'd better give up the mines?" This often grudging acceptance of child labour in the 19th century turned into general opposition in the 20th. One mine boss of the 1920s claimed that unless a boy were very poor, he could not be given a job. Until this reform, however, the sons of miners were expected to work in the mines to help the family's survival. The additional income provided by the boys, often staying within their families after they reached adulthood, was necessary for families aspiring to independence and home ownership. It was yet

31 *Mines Reports*, 1880-1914; Transcripts, Springhill, p. 12. According to the first mines regulation act, no boy under ten years of age was to be employed above or below ground. Boys from 10 to 12 years of age were not to be employed more than 60 hours in any one week, nor more than ten hours in one day. Employees in charge of hoisting men were to be more than 18 years of age, and if a boy gained employment as a result of misrepresentations by his parents, his parents were to be deemed guilty of an offence against the act: *Revised Statutes of Nova Scotia*, Fourth Series, 1873, Chapter 10, "Of the Regulation of Mines". In 1891 this section was changed. By the new law passed in that year, no boy under the age of 12 was to be employed in or about any mine below ground or above ground; and no boy of 12 years or more was to be employed unless he was able to read, write, and to count "as far as division", and furnish a certificate to that effect from a licensed teacher. Boys were not to work more than 54 hours: *Statutes of Nova Scotia*, 54 Vic. Cap. 9. "An Act to amend Chapter 8, Revised Statutes, 'Of the Regulation of Mines'". A decade later the law was tightened by inclusion of a provision which placed the onus for non-compliance on the owner or manager, unless it was proved that reasonable steps had been taken to publish and enforce the law: *Statutes of Nova Scotia*, 1 Edwd. VII, Cap. 27, "An Act to amend the Coal Mines Regulation Act". An amendment in 1923 ruled that no boy under the age of 16 years of age was to be employed in or about any mine: *Statutes of Nova Scotia*, 13 Geo. V,Cap. 54, "An Act to Amend the Coal Mines Regulation Act".

another mining contradiction: to gain independence and home ownership, one had to combine "family time" and "industrial time", to co-ordinate one's productive and reproductive strategies, and thus become less independent. One reads in the records of the union rather desperate pleas on the part of fathers to place their sons in the mine, especially in the 1920s: "Jeff Hibberts states he got three boys laying around and eating every thing and the Company won't give them work without permission from the Local. It was moved and seconded that we give the Company no permission to hire on new men...". Boys were forced to compete with each other in a desperate search for jobs in the 1920s. Those who maintained a home were to take precedence over teenaged boys who wanted to work, the union ruled in 1923. Those who had not understood the tight bonds tying families to the mines easily condemned the families who sought compensation for children killed in the Explosion of 1891 or other mining accidents, inferring sordid profiteering from petitions more likely motivated by the desire of families to survive after the loss of an important breadwinner.[32]

The popular image of children in the mine as pure victims of their parents or society is a very misleading and partial one. From the boys' own perspective, going to the mine meant coming of age, fulfilling a goal established by their earliest upbringing. Entering the mine meant initiation into the world of manhood. Women in Springhill, recalling their childhood, remember that once their brothers entered the mine, their status in the household changed: now they had to be waited on. Entering the mine was a declaration of independence. One miner recalls joining the workforce one day on his way home from school, simply because he could no longer bear sitting at a desk. Another recalls putting on two overcoats to convince a mining manager that he was 14, when in fact he was only 12. Another revealingly describes starting at the mine as part of a sequential initiation into adulthood: "At fifteen, I wanted to work, because I was getting pretty big. And I started smoking, you know? And I got caught. So I decided to go and register at the post office. Mrs. Purdy [the post office woman] ...Mrs. Purdy, I said, 'I'm sixteen years old today. I want to register'. She registered me. That afternoon I went down and got a job with the company".[33]

It was a rite of passage, and like most such moments was marked by rituals of initiation. This was suggested in an eloquent description of the Springhill pit boy in the *Morning Chronicle*:

> Long before your city boys are astir the pit boy is awakened by the steam whistles, which blow three long blasts every morning, thus warning him that it is time to get up. Breakfast partaken of, he dons his pit clothes, usually a pair of indifferent-fitting duck trousers, generously patched, an

32 Transcripts, Springhill, p. 66; Transcripts, Joggins, p. 1; Springhill Minutes, 8 January 1927; Springhill Minutes, 15 October 1921; Springhill Minutes, 20 January 1923; *Amherst Evening Press*, 22 April, 7 September 1891.

33 Transcripts, Joggins, p. 20; Transcripts, Springhill, p. 55; Transcripts, Springhill, p. 58.

> old coat, and with a lighted tin lamp on the front of his cap, his tea and dinner cap securely fastened on his back, he is ready for work. He must be at his post by 7 o'clock. Off he goes, and in a few minutes with a number of others he is engaged in animated conversation, and having a high old time generally, as he is lowered to the bottom of the slope....At work they are up to all sorts of tricks. Full of mischief, they are continually surprising each other with new pranks....And the "greeny" fares badly enough when he enters the pit for the first time. His face is painted with black oil and other handy colours, until he resembles a full blooded Sioux on the war-path. If his hair happens to be long the boys step up behind, burn off the long ends, blow out his lamp and disappear in the darkness.

The *Journal and Pictou News*, the organ of the Provincial Workmen's Association, denounced a rough initiation in 1891: "Four or five half grown up boys set upon a quiet loader as he was going to his work along the level of the West Slope. They used him roughly, kicking and striking him. If this is the initiation given to strangers or green-horns, it is high time the matter was looked into and stopped". A hazing ritual of unusual severity and coarseness was the occasion of a conciliation case that went all the way up to the Department of Mines in 1894: it involved sending a new recruit into an abandoned balance used as a latrine.[34]

Most contemporary commentators portrayed the pit boys as misguided outcasts or contemptible delinquents. "The children in a mining district", noted a well-travelled teacher, "are particularly rough and uncultivated". They were suitable candidates for moral improvement by such groups as the Springhill Boys' Brigade in Springhill, a group numbering 50 in 1891 which the Presbyterian Church aimed specifically at this special class of children. C.W. Lunn's novel of Springhill life portrays an unruly horde of pit boys rescued for respectability by the local equivalent of Horatio Alger. Others saw the boys more ominously as juvenile delinquents. "The spirit of war permeates the breasts of the Spring Hill youths", it was noted in 1885, a comment prompted by a battle between the "pit boys" and their enemies the "school boys" which spilled over into the police court. The drinking customs of the boys and their public rowdiness were frequently denounced, as was a charivari involving the shooting of a cannon which damaged the Presbyterian Church. Strict enforcement of truancy laws and a crackdown on juvenile offences by the local stipendiary magistrate were two responses. The *Amherst Daily News* thought the unruliness of the boys would be corrected by a generous application of the "parental slipper", while the *Critic* hoped that new haulage methods, by eliminating a good part of boys' work, would also end the latitude which had been so morally and intellectually

34 *Morning Chronicle*(Halifax), 4 December 1890; *Journal and Pictou News*, 21 October 1891; Case of Jesse Armishaw, File "Coal Mines, 1887-1898, Disputes", RG21, Series "A", Vol. 13A, PANS.

injurious to them.[35]

The Critic's comment was far more perceptive than those of its contemporaries, for this comment put the finger on the essential problem: the workplace. What appeared to worried civic authorities and outside observers (and conceivably some parents) as mere delinquency was in fact something far more complex: the achievement of collective independence by a group of workers who, in most other workplaces or communities, would have been swiftly put in their place. The "latitude" within the workplace they enjoyed stemmed from their indispensability to the continued functioning of the mine. Without them the horses would not be driven and the mine would choke on its own gases. The boys, incorporating their functional indispensability, had been educated by the mine: educated, that is, not only in the art of survival, but in collective unity and discipline.

For some boys this education was frightening. One miner had a recurring nightmare for years afterward of being pushed off a cliff — a response to his first journey in the trolley which carried him into the pit. Another remembers his first encounter with a "ghost" in the mine. Sent by the overman to trap a door on another level, the boy was instructed to walk up a travelling way until he reached the designated level. Up he started. "I got a couple of hundred feet up the travelling road when this groaning started....I heard moans and groans — I said to myself, 'That's a ghost'. I kept going up and going up. A great big grey cloud...started down. Boy, when I seen that, down the hill I went". An unsympathetic overman explained to the boy that all he had heard and seen was a pump, starting up and emitting exhaust into the air.[36]

There is a general consensus that most boys quickly overcame their initial fears. Much depended on the kind of job they had. Surface jobs were relatively routine: sometimes under the supervision of one's father, more often slight work thought inappropriate for a man. One nine-year-old who started work in 1893 was given the task of spreading ashes on the Springhill race-track owned by the company — until it was found that he was too small to handle the ash-cart, whereupon he was given a job underground. Other boys' jobs included oiling coal cars with beef tallow, or taking the tallies off the coal cars as they came up. The main jobs for young workers were underground. One of the more common jobs, trapping the ventilation doors, entailed very little physical labour. "There's no work in it", remembers one miner. It merely involved pulling the door open to allow the horse to go through. Alone, waiting hour after hour in the dark for the noise of the coal cars, listening fearfully to the sounds of the numerous rats and the ominous echoes of explosions: these, not strenuous overwork, constituted the perils of trapping door. Managers regularly were faced with trapper

35 *The Bulletin* (Dartmouth), 15 December 1886; *Journal and Pictou News*, 21 October 1891; Ian McKay, ed., "From Trapper Boy"; *Trades Journal*, 1 April 1885; *Amherst Daily News*, 8 July 1905; *Critic*, 4 December 1891.

36 Transcripts, Joggins, p. 87; Transcripts, Springhill, p. 154.

boys who had fallen off to sleep, and Springhill's very first underground fatality was the death of 12-year-old boy, David Ferguson, who on 3 November 1877 left his post as a trapper boy, and "climbed up the balance way where he had no business to go", where he "was most unfortunately met by the counterbalance box, run over, and killed".[37]

Not all the children's jobs were so monotonous, or so physically undemanding. In the days of chute loading, boys were set to "pulling the rag", a crude method of getting the coal down in to the coal cars. Here is one description, which comes from the 3800-foot-level in the North Slope: "We used to pull them long rags of canvas, about 25 feet long, hook it into your belt and haul it up to the chute there, where the miners were digging and shovelling their coal back. And we loaded up those rags and rode them down — tipped them all up like a sack of oats, only twice as long, and went down over those sheets. We used to have a bar about 40 feet from the bottom, and when we hit that bar — we used to have a lamp hanging there — we'd grab that bar and let that thing go on without us". Backs were skinned raw from hitting the timbers. Shoving down the coal meant shoving down the coal with one's feet; it was very common in Springhill in the early 20th century. "The miners would come out with a ginney [about a half-box of coal] — dump it on a sheet, and we'd push it down", recalls a veteran. "You'd wear out a pair of overalls in about a week". Other boys came prepared with a canvas on the trousers to avoid wearing out their pants. These are jobs which add a new vividness to the term "labour intensive", but gruelling as they sound, boys preferred working together in groups of four in such rough strenuous work, or driving horses or carrying lamps for refilling, to such boring jobs as "turning the fan" to bring ventilation to places the air current could not otherwise reach.[38]

The work was often rough and exhausting, or excruciatingly dull. But it was a far cry from the unrestrained exploitation of children in (for example) the cotton or tobacco industries. Aspects of the work completely fascinated the boys: here, after all, was a strange, dark, noisy environment, full of secret passages and explored in the company of friends. Despite the company's disapproval, boys often regulated the assignment of work themselves by trading jobs to break up the monotony of the work. The same tight family ties which made mining work inevitable softened its impact, both by allowing children to pick up a lot of mining lore from their fathers, brothers, uncles and cousins, and by placing a limit on how far an employer could go in exploiting the boys. An unjust dismissal of a boy would be raised in the union and contested vigorously. There appear to be no mining parallels to the arbitrary punishments and cruelties heaped on factory children: managers would occasionally swing their cane at boys, and

37 Transcripts, Joggins, p. 66; Transcripts, Springhill, p. 160; Transcripts, Joggins, p. 19; Transcripts, Springhill, p. 39; *Mines Report* (1877), p. 58.

38 Transcripts, Springhill, p. 15; Transcripts, Springhill, p. 30; Transcripts, Springhill, pp. 15-16.

bluster and threaten in an appropriate manner, but there is little evidence beyond that.[39]

The boys give us a striking illustration of the inner contradictions of mining. Such work undeniably exploited the boys and imposed upon their young lives untold dangers. It also gave these juvenile workers a fighting strength unique among the thousands of children who were swept up by the industrial revolution. They were both imprisoned and enfranchised by the mine. It was wishful thinking to believe that such workers, essential to the ventilation and transportation systems of the mine, in an environment resistant to centralized control, could be quelled by the "parental" or any other "slipper". The boys, many between the ages of 12 and 14, were militant and effective. They developed with surprising speed the instinctive solidarity and independence that were associated with the adult miners. And, going beyond this "functional" explanation to a "strategic" one, the boys knew they could rely upon the solidarity of the adult miners, without whose tacit support their frequent strikes could not have been fought.

This truth was captured in a newspaper story on one of the many juvenile strikes: "It is said that parents ought to control their children in such a case. I have heard even workingmen say it. And perhaps they were right as regards children, but there are no children working in the mine. They may be children when they go in at ten or twelve years of age, but a fortnight or so thoroughly works that out of them. They then become very old fashioned boys. They get inured to all sorts of danger and hardship; they have, in a word, to think for themselves, as regards their work. As a matter of necessity, and as a matter of course, they soon presume to think for themselves on all matters, their parents to the contrary, notwithstanding. Then it is necessary to lead them. They won't be driven; they won't be ignored. *They have the whip hand in every sense.* The men know this. The management ought to know it".[40]

The coal boys' militancy was frequently judged, in the press, to be motivated by trivial and childish considerations. Some of the boys' actions do bear the marks of youthful high spirits. It was simply a fact of life in the Joggins that the boys would leave the mine for baseball games — so much a fact of life that these little "strikes", which had the effect of shutting down production, were scarcely noticed in the press. Some boys' strikes were used by coal companies to embarrass the adult miners. One turned on the discharge of a boy accused of sexually abusing a horse; although the truth of the charge was never established and the

39 Transcripts, Springhill, p. 113. For example, see this case in the Joggins Minutes (19 July 1905): "Bro tom Livingston Said his son was discharged Some Six Weeks or two months ago in order to save trouble he kep[t] the boy Home as the boy could not get along with Coleman the overman as he [Coleman] Seemed to have some sort of spite to the Boy...". The case was strenuously fought by Holdfast Lodge. See also *Nova Scotia Evidence*, p. 294, where William Hall denied ever whipping boys.

40 *The Journal* (Stellarton), 21 January 1891 (emphasis added).

newspaper reported that it had been the original desire of management "to withhold the story of immorality from the public, out of sympathy for the boy's relatives", this claim appeared dubious after the management gleefully used this unproved charge in later disputes as an illustration of the mindless militancy of the miners. Editorial commentary on the "irrational boys", besides its obvious uses as a weapon against the miners, probably did capture one element of the situation: the possibility that the boys were somewhat impetuous.[41]

The boys' strikes, which often tied up the economic life of the entire community, would scarcely have been sustained by their fathers for trivial reasons, and there is only one clearly documented instance of the men not supporting the coal boys in a strike. (And, in an interesting demonstration of the boys' bargaining power, the miners who had failed to support them found the boys reluctant to take their coal away after the strike was over). Many of the boys' issues were not in fact trivial, but involved job security, wages, standards of payment, and the allocation of work. The defence of job standards for boys' work was not a trivial matter for families depending on this income. Coal miners took the boys so seriously that for a time they organized them within a separate juvenile lodge of the PWA, subordinate to, but meeting independently of, the adult lodge. Few observers noted that most of the boys' strikes were fully supported by the men and were fought through to a successful conclusion.[42]

The most compelling illustration of the power and outlook of the pit boys comes from the man who was least sympathetic to them, Henry Swift. It was characteristic of Swift that when he was confronted with frightened boys in the North Slope who believed the wheels on a coal car to be dangerously defective, he conceded they were right and put on new wheels, but then went on to threaten the suspension of "any man or Boy who refused to do his duty". Swift refused to deal with militant boys in anything other than hostile terms. He wrote to his superintendent on 14 May 1890:

> Met Reese [underground manager]
> Who informed me that some of his Boys was getting rebellious and that some of them had been that way for a month
> Told him to Consult McInnis in the Matter and to exchange them with other slopes which changes their Company & surrounding and have its effect When Boys are Kept Working Togheter [together] they are always Combind togheter for some Mischief and there are Matters which always require freaight [fright] to deal with them

And again on 14 November 1890:

41 *Herald*, 15 August 1905, 7 June 1906; *Morning Chronicle*, 2, 4 December 1890.

42 *Herald*, 5 December 1906. Of the 14 boys' strikes in Springhill from 1879 to 1911, 11 were clearly victories for the boys; the remaining three were compromises.

> Had a Committee of Boys to the house this evening about rates of wages Refused to treat with Boys and told them to send either the Pioneer Committee or their parents

And again on 29 November 1890 — he had by this time precipitated a strike by discharging a boy named McDonald:

> Boys Came down in the afternoon and asked Me if McDonald was going to get his work again I told them NO they went of[f] again have heard of nothing since
> They are evidently backed by a large Majority of the Men Something will have to be done towards weakening their power Kindness and steady work do not seem to be of any use or have any desired effect
> The More we do and the More we can do for them the steadier the work, the greater their independence

Swift, in his own mind and in the opinion of the vast majority of his contemporaries, would have been completely justified in sternly disciplining all these boys. But — and here we grasp the very essence of the mining experience — such strictness could not work. Even Swift, a good mining man but no genius at labour relations, grasped how deeply entrenched this problem was. Let us cite him one last time on this question, as he graphically suggests the deep origins of this attitude of independence on the part of the children:

> In the afternoon about 2 P.M. [2 December 1890] the So Called Committee of Boys Came into My office — asked them what they were after this time — one said Mr. Swift we came to tell you we are going to start working the Morning again — who told you to go work again — the father of McDonald is going to settle the Matter by law
> He said Mr. Swift it is not our fault about the stop[page] it was the Lodge's fault and there was Some Mistake in the case — I hesitated a few minutes and had thought to tell them to Come again at 7 P.M. and in the Meantime telegraph you — I then thought conversations in A.M. — better to let them Start — I told them not to come to me again as a committee Never intended to recognize them again I Gave them a downright Good talking to — told them that their actions were a disgrace to them their parents and in fact all Springhill. One McMullen who has very little home restraint replied well Mr. Swift the men transact their own business and we thought we could do ours which I considered a very frank acknowledgement as to the old [adage] "Cock Crows the Young one learns".

Could one ask for a more revealing episode? Even after Swift has his great tirade, even after he has threatened never to recognize them again (a rather odd

thing to say after he had just finished negotiating a return to work), after all this, uncowed young McMullen has a rather self-assured reply to make to him. "The young ones learn": Swift had captured the essence of the boys' experience in the mine.[43]

Once one had been initiated and absorbed the mining outlook, the paths of advancement to being a full-fledged collier were not straight or well-posted. There were very few established rules about the way workers were promoted. Elisha Paul described one commonly followed path in 1888: a boy would first start out trapping door, then move up to "shoving down", "pulling the rag",or driving horses; then he would become a brakeholder on the incline or counter-balance, or a cage-runner putting on full boxes on the balance and taking off empty ones; then he would move up to loading, helping two men take out the coal, and finally he would advance to "the picks" — become a fully-fledged miner — or to company work. These steps sound more precise than they really were. Despite continuing union attempts to enforce certain regular standards of promotion, the whole business was governed by the same rule-of-thumb empiricism one finds in so many other places in the mine. One major criterion for advancement seems to have been size. "In the early days, you wouldn't get a raise, you had to go and see the general manager", recalls one miner. "You wouldn't go in a crawl, you know. I went down to see him one day for a raise — I was only getting 61 cents — Oh, he says to me, "You're pretty small", and he took and picked me up and put me on the desk. And I said, "The money's pretty small, too". "Oh", he says, "All right", and he wrote me out a paper...". We hear echoes of this same story in the union records for 1927, in which we find one Brother Lees complaining that because of his short height the boss would not promote him, even though he was 18 years old.[44]

The rule of thumb in the 19th century was that boys' work stopped at the age of 17 or 18; then one became a loader. Now began the boy's immersion in the functions of production and his informal training as a miner. Of all the major occupational categories in the mine, that of the loader underwent the most important changes. In the 19th century the loader was employed by the coal cutters; in the 20th century he tended to be a company hand. The task of loading could be arduous, especially in places where the pillar size entailed shovelling the coal twice to get it out. Very often the boy would now load for his father and pick up the tricks of the trade from him. Once he got to shovelling, a boy would, "if pretty smart...get some older miner to help him", Elisha Paul told the Labour Commission in 1888. In the 1890s and later, the qualifications for mining coal became more stringent. After new legislation requiring such certification was introduced in 1891 a man had to wait at least one year before he ad-

43 Swift to Cowans, 5 June 1890, 14 May 1890, 14 November 1890, 1 December 1890, 2 December 1890, Swift Letterbooks.

44 *Nova Scotia Evidence*, p. 270; Transcripts, Springhill, p. 33; Springhill Minutes, 21 May 1927.

vanced to the picks.[45]

The colliers, at the apex of the mining workforce, were men who stood with one foot in the world of the protected craftsmen and the other in the world of unprotected labourers. Since the labour of boys was not really an "apprenticeship" in anything but the general sense of learning one's way around the pit, they did not share the craftsmen's sense of having been rigorously trained for their jobs. Classifying types of work as "crafts" or "skilled labour" on the one hand and "unskilled" labour on the other involves a far more complex series of judgements than is normally realized. Precise tables showing occupational hierarchies along a skilled/unskilled continuum falsely suggest that there is some neutral, scientific test of the inherent "skills" of a job. But skilled "crafts" are created when certain groups of workmen are able, usually on the basis of their mastery of a few precise tasks, to control basic elements of the labour process because of the scarcity value of their specialties, whether "naturally" induced or "artificially" imposed through monopolistic practices. The process of capital accumulation often brutally exposed the claims of craftsmen to a special mastery of a complex discipline, and showed, even in the absence of technological advances, that such claims could be overthrown in a free labour market.[46]

In coal mining the question is both particularly complex and especially urgent. European precedents are highly ambiguous, ranging from slavery and convict labour in ancient and medieval times, to guilds and well-defended monopolies in the medieval and early modern periods. The coal miners' position was complex because while they felt themselves to be highly skilled workers worthy of the respect accorded such men, this claim was not acknowledged in the world at large. There were three main obstacles to general acceptance of the coal miner as a skilled worker. The first was that the coal miners' skills were highly contextual. As Rolande Trempé notes, most of the components of underground work — the exact way the coal was attacked, the mine roof held up with timber,

45 *Nova Scotia Evidence*, p. 270; *Statutes of Nova Scotia*, 54 Vic., Cap. 9, "An Act to amend Chapter 8, *Revised Statutes*, 'Of the Regulation of Coal Mines'". The second reads: "And in no mine...shall any person not now employed as a miner 'be given the picks' to work as a miner unless he has been employed in a mine, in some capacity, for the space of one year; no one shall be given charge of a 'working face' in a mine who has not worked previously in a mine for the space of two years; nor shall anyone now a miner be employed after the first of January to mine coal who is not a holder of a certificate of service. And no one not now a miner shall be 'given the picks' to work as a miner until granted a certificate of competency after examination by the Board of Examiners appointed for the purpose of granting certificates as managers, overmen, or shot-firers, or by an examining board to be hereafter appointed, who shall have power to frame laws and conditions under which said certificates shall be granted".

46 R.J. Morris points out in "Whatever Happened to the British Working Class, 1750-1850?", *Bulletin of the Society for the Study of Labour History*, 41 (Autumn 1980), p. 14, that the labour of "unskilled" 19th-century dressmakers was every bit as complicated and demanding as that of the "skilled" tailors.

the explosive charge measured — did not individually require great ability and could be acquired rapidly; what was less automatic was the knack of intelligently integrating these practices within an overall context. But outside the mine such skill had no value, could not be transferred to other contexts, and consequently "disappeared". Royden Harrison makes the same point in a different way, when he notes that the coal miner did not actually produce an article instantly recognizable as a product of skilled labour. Outside the mine the coal miner's reasonable claim to be considered a skilled worker received scant recognition, for his work — dirty, physical, and dangerous — did not fit the stereotype of skilled labour.[47]

Even *within* the mine the question of skill is complex. The skills of the miner were important in determining the percentage of round coal, the total productivity of the pit, and the quality of the coal raised (judged by the presence of impurities). But their most crucial manifestation was in the coal miner's capacity to survive in the pit. As Trempé notes, one of the greatest "skills" of the miner was his ability to watch out for the dangers which always surrounded him, to listen for the least noise, to smell an abnormal odour, to spot a poorly timbered roof, to notice the unusual appearance of a lamp or the strange sound of a pick.[48] The most skilled miners, in this sense, were those who emerged from their days in the pit in one piece. Whatever their immense importance for the individual miner, such skills did not generate surplus-value for the employer. Barring carelessness endangering the entire mine, the caution with which individual coal miners worked was of little concern to the coal companies and did not matter to the general public. His essential skills — prudence, caution, watchfulness, judgement — were somewhat intangible, difficult for outsiders to grasp.

By a certain cruel irony we read most about the skills of the Nova Scotia colliers in sharply-worded criticisms in the *Mines Reports*. "There is a system that prevails to a great extent, of allowing the miner to do nearly everything himself that is required in the course of his operations, respecting which I would also remark, that although his own safety should be a sufficient inducement for the exercise of care in working, yet it is well known that to save a little trouble, risk is very frequently run": this entry in 1867 paid a roundabout tribute to the colliers' versatility on the way to condemning his carelessness. "Most of the casualities [sic] caused by falls of coal and stone were due to the neglect of the persons injured, to set props and sprags or remove blocks of coal and stone known to be loose and unsecured", H.S. Poole noted severely in 1872. He noted one accident in Victoria Colliery, for which he held the miners accountable, because they had allowed an "inexperienced" man to work in a risky place. This

47 John U. Nef, *The Conquest of the Material World* (Chicago and London, 1964), pp. 23, 26-27; Trempé, *Les mineurs*, t. I, pp. 112-13; Royden Harrison, "Introduction" to Harrison, ed., *Independent Collier*, pp. 4-5.

48 Trempé, *Les mineurs*, t. I, p. 113.

analysis only gave the colliers' skills a back-handed recognition: their absence had allegedly proved fatal. Such analysis of the colliers' "carelessness" always tended to overlook the tragic choices between earnings and safety, production and survival, that men in the mine had to make. The careless shot-firing by officials in Springhill from 1888 to 1891 had a real economic rationale: it would have required time, wasted money, and possibly provoked conflict with the upper echelons of management to insist on greater care.[49]

Finally, the coal miners' acute vulnerability in the labour market set him apart from the archetypal craftsman. Because many of his skills related more to his own safety than they did to production, employers had little to lose in hiring newcomers. At Chignecto, where men were hired without many questions asked in the early 1880s, it was said: "Engineers and other mechanics are made slowly; miners are produced in the twinkling of an eye. It is no wonder that accidents are so frequent". One new foreign recruit in Springhill found his way out of the mine by lighting matches on his way up. The marginal losses in productivity entailed in employing such untrained workers could be offset by the economic benefits of undermining the miners' trade union strength. Coal miners dismissed as "hemlock butchers" those who flooded into the mines from the rural areas, and sought the rigorous enforcement of certification rules, but the essential point is that they never felt protected, simply by virtue of their "skills", from such men.[50]

It is here that one encounters a major difference between the Joggins and the Springhill coalfields. One more often encounters outright dismissals of the idea of the miner as a skilled workman in the Joggins field, where small mines proliferated, men frequently switched mines or picked up secondary employment in the woods, and coal cutting machines were common. One miner, asked if his father had helped him to gain experience in the mine, laughed and remarked: "It was just a daily routine, mostly all the time. You go down with your picks and your shovels, and dig and load and get as much as you could out and make as much money as you could and that's all there was to it...There wasn't much 'experience' in that". At the Strathcona Mine, another remembers, the miner had to do everything for himself — it was "really poor coal mining". Working in the small mines near Chignecto was gruelling. In such one-horse mines, workers were responsible for a wide range of jobs, and could put in a 13-hour day. They had little sense of themselves as skilled craftsmen.[51]

There are different memories in Springhill. Many factors help account for the greater sense of the skills of the miners: a deeper psychological investment in jobs which lasted a lifetime, the much greater stability of the community, a larger population which could sustain a sense of mining as honourable work. The most significant single factor was the banning of powder as a result of the

49 *Mines Report* (1867), p. 44; *Mines Report* (1872), pp. 43-4.

50 *Trades Journal*, 21 March 1883; *Springhill News and Advertiser*, 5 November 1902; *Trades Journal*, 30 June 1880.

51 Transcripts, Joggins, p. 34; Transcripts, Joggins, p.31; Transcripts, Joggins, pp. 36-7.

Explosion of 1891. This protected the traditional skills of the collier at a time when these were being changed by new technologies elsewhere. "Some people think that a miner just goes down there and works away", one miner remarked indignantly. "But mining is a profession — or some word to that effect. Mining is like anything else — it's like carpentry work. You've got to know what to do, you've got to know how to do it....There is skill in it. A lot of people think, 'A dirty old miner, a dirty old miner', you see? But it's a skillful job". Springhillers were proud of their distinctive skills. The bumps which made No. 2 such a dangerous place to work in the 1920s also set brave Springhillers apart from fearful outsiders from Cape Breton who happened to seek work there, and the lumps in the coal which made the seams so hard to mine gave the Springhill colliers a sense of having a very special skill. "There was a lot here couldn't make their salt", it is proudly remembered, "See, this coal here, especially in No. 2, it ran in big lumps, and you couldn't just pick the coal out and get any amount of coal, you see, because you had to know just how to do it. You had to go in behind the lump, you see, you had to maybe work an hour or so, get a little soft place maybe that wide, dig right in till you got to the back of it, like that lump would be maybe five or six feet thick. And when you got to the back of that, you got ten or twelve foot prop, and three or four men would get onto it, and pull on it, and pull it out. You couldn't break that lump in the face, you had to pull it away from the face". No. 2 mine thus preserved, in a very unusual way, the hand-pick technology and the individual judgement of craft mining.[52]

This sense of being skilled gave the colliers in Springhill, and to a lesser degree those of the Joggins field, a strong sense of independence. You were "pretty much your own boss in the pit", it is said. Miners in charge of their own place developed a strong proprietorial interest in it. A place was often named after the men who worked in it, and they expected to have the place reserved for them, even after a long illness. As David Frank observes in Cape Breton, the extensive, honey-combed interior of a room-and-pillar mine contributed to a strong sense of autonomy. In some respects the traditional bord-and-pillar mine resembled a series of independent workplaces, run by colliers who looked after the day-to-day running of their place, including laying track for coal cars and timbering.[53]

Added to this strong sense of place were the frequent interruptions of work in the mines, the result of the inefficiency with which their systems were integrated. This gave workers the time and opportunity to talk together, and "pit talk", here and elsewhere, helped the miners to form a collective outlook. Danny Boutilier, the poet of the Springhill miners, wrote some of his verses with chalk on coal cars during such work breaks. Had miners been able to send the coal from their individual bords to the surface all by themselves — which was close to the

52 Transcripts, Springhill, pp. 92-3; Transcripts, Springhill, p. 33.

53 Transcripts, Springhill, p. 11; Springhill Minutes, 30 January 1926; David Frank, "Class Conflict in the Coal Industry", p. 167; Springhill Minutes, 27 March 1926.

situation which prevailed in the numerous "bootleg" pits of the area — their outlook might not have differed essentially from such primary producers as fishermen; even in this far more collective mining environment, "independence" at work frequently meant fragmentation in enforcing common union standards of wages and conditions in the pit. Uniting so disparate a group of independent men was by no means an easy or automatic process, especially in the 1880s and 1890s when most underground workers either worked under contract and were paid according to the amount of coal they produced, or were in turn paid for loading coal by the colliers themselves. But this difficult task was possible because they shared a unifying context and unifying problems. The mine's integration of many distinct functions allowed a heterogeneous workforce to become an increasingly unified one. This was not the mechanical unity which isolation theory thinks stemmed from the supposedly "homogeneous" work of the mine but the infinitely more difficult unity achieved among independent men working in an astonishing variety of conditions and doing a number of different jobs.

Equally important for stimulating the colliers' independence was their intellectual parity with management, a by-product of mining's technological backwardness. In the absence of a technological revolution in mining, the coal miners knew as much about their workplace as their bosses. Only after the First World War, with the much more systematic planning effort of the Dominion Coal Company, were "concept" and "execution" divorced in coal mining. The colliers knew their workplace intimately. They were capable of independent assessments of its productive efficiency and its peculiar problems. To pick a few examples from hundreds: the miners of Joggins in 1895 wanted the settlement of a knotty problem concerning whether one place should be paid at a higher rate because of the difficulties of producing coal within it. A committee of the men examined the place, measured the coal and the clay within it, determined the average thickness of the coal in the place and in the entire balance, analyzed the report from their checkweighman regarding the boxes coming from the area for the preceding three days, and, after all this, calculated what they considered a fair price. Similarly, the *Trades Journal* criticized the new Springhill ventilation system introduced by an allegedly scientific management in 1889 by making sarcastic references to the "planners" with their "latest, most improved, scientific methods", who had overlooked the obvious practical point that two opposing currents of air could not "meet, say good day to each other, and then pass on their respective missions".

Portrayals of the coal miners as automatically suspicious of innovations are often oversimplified, for miners would have had much to gain from many scientific advances in mining (such as improved ventilation or regular transportation). But the grain of truth lurking within the stereotype was that innovations introduced by the company would be assessed independently and often very

sceptically. Swift described the debates within the mine over the introduction of a box with a new kind of wheels: "[E]veryone seems loud in denouncing the Wheels....one says he wished they were all in *Siberia* an other says he wished they were all in *Purgatory* for my part I think them first rate....anything new always meets with a certain amount of prejudice when first introduced". Whether it was mere "prejudice" on their part is doubtful: the box's defects were admitted by Swift, and a young bottomer had just been injured by it. But the resistance to sudden changes also stemmed from the coal miners' strong sense of precedent, nurtured in this most historical of workplaces and preserved with scrupulous care in his union's minutes. Swift wrote of this tendency after being approached by the miners to have their coal loaded by company hands: "it would only in my opinion be opening a back door for trouble some future day that is one thing to be carefull in establishing precedents for they are always or stuck for the future and come up when You least think". What made the miners' strikes in early 20th century Springhill so bewildering for outsiders was that they often involved references to 20-year-old agreements and understandings, interpreted and reinterpreted in interested ways by the opposing parties.[54]

Coal miners enjoyed many freedoms denied other industrial workers. The miners were often keen to assert their right to leave the mine whenever they chose, once their day's work was done — although this particular custom was questioned by management. The custom of leaving work was prevalent in parts of the Joggins coalfield. Even more powerful when it came to setting hours were the miners of Nos. 6 and 7 mines in postwar Springhill, who dictated how long the bankhead staff would work: only when the miners got the amount of coal out that they wanted would the datal men be allowed to go home. The collier's informal regulation of how hard one worked in the mine — what management would denounce as a "restriction of output", and which would later be formalized in the Cape Breton strategy of the "wee darg" — also reflected his independence in the mine.[55]

Centrality and power: the description applies to the colliers above all the other workers of the mine, for they exerted the most direct and visible control over the heart of the coal-mining process. Their leadership in trade-union matters, unquestioned in the 19th-century PWA, was still apparent in the more heterogeneous UMW in the 20th century. In the records of the union one finds many cases which reveal the leading role taken by the coal miners, and certain indications that tensions existed among the various groups in the mine and

54 Joggins Minutes, 4 September 1895; *Trades Journal*, 25 September 1889, 9 February 1881; Swift to Cowans, 29 March 1890, 18 January 1890, Swift Letterbooks.

55 Springhill Minutes, 2 February 1918. In July 1904, the boys of Joggins successfully fought a strike on the issue of being allowed to leave work once their work was finished, rather than putting in a set number of hours: *Amherst Daily News*, 16 July 1904. See also Transcripts, Springhill, p. 34. For further information on restriction of output, see Frank, "Class Conflict in the Coal Industry", pp. 172-3; McKay, "Industry, Work and Community", pp. 547-50.

between the men of the surface and those of the underground. But it would be a grave exaggeration to make this favoured position of the coal miners into something analogous to craft exclusivism. The objective structures of the mine did not favour the growth of such a mentality, because they gave to each group of workers the power to shut the mine down. They encouraged workers to be collective in their outlook. Colliers defended the rights of other workers and fought on their behalf. On at least one occasion Springhill colliers turned down wage gains for themselves in order to give them to the less advantaged datal employees. On the surface, machinists and other craftsmen existed in the larger mines who too might have formed an exclusive elite, but they did not do so. Because many mining families had members employed at various jobs in the pit, the economic interests of the coal miner were often identical with those of his son the cage-runner; because he would expect lighter work on the surface after he grew older (and close to 10 per cent of the Springhill workforce was older than 50 in 1908) he also had a strong interest in maintaining good standards for such jobs.[56]

The work of the miner was physically demanding and stressful. Some men could not adapt to it and demanded other kinds of work. Others found the work almost pleasurable. The farmers who took it up rejoiced in the absence of the harsh sun, and many men enjoyed the physical energy released in such hard labour and the camaraderie of the mine. It was hard to wean men away from the mines. Once they had been socialized as boys in the pit, the lessons were hard to forget. Those who went on to factory jobs would marvel at the divisiveness of the factory world: "Everybody was pulling against each other", remarks one miner who tried it. They would miss the jocular atmosphere of the pit, and the familiarity with fellow workers. "I never had any regrets about working in the pit, never had any regrets about it. The pit was a good place to work. Nobody bothered you a hell of a lot. You done your work and then...that's just about all there was to it. You had lots of fun sometimes — talking, joking, everything". "It's in the blood", a recurring phrase, captures in a striking genetic metaphor this profound occupational loyalty, passed on from generation to generation, and seemingly at odds with any weighing of the costs and benefits of mining. Faced with this tradition, shallow analysis comes up with "isolation", "the absence of alternatives", "no education". Such appraisals miss the true nature of the problem. Miners, in a unique and unlikely historical conjuncture, had been given the opportunity to humanize a workplace. That is why they would persist in their jobs, even as the industry edged ever closer to collapse and the mines towards their all too inevitable demise.[57]

56 See the *Trades Journal*, 18 May 1881, for a separate vote held by surface workers on questions pertaining to them. The miners deliberately abstained on the issue; *Journals of the Nova Scotia House of Assembly*, 1908, p. 132.

57 Transcripts, Springhill, p. 113; Transcripts, Springhill, p. 168; Transcripts, Springhill, p. 54.

This intense loyalty is most clearly expressed in Springhill. The larger mines of Springhill were well-equipped: 20th-century miners had wash-houses, riding rakes, a durably installed union. There were few problems (after 1891) with ventilation, and the mines were not particularly wet. In most parts of the mine there was ample working room. Many miners considered the Springhill mines to have been model mines; some are lyrical in their praise. The bumps are blamed not only for killing so many men but also for destroying an excellent colliery.

The situation in the Joggins coalfield is quite different. Here it is not uncommon to find men who have worked for ten different companies, over a period of 25 years. Men moved from mine to mine, and in and out of mining altogether. Because of the extraordinary mobility of local labour, and contrary perhaps to what one might expect, such small rural mines were less likely to produce a tradition of the "independent collier" than their larger, more urban, counterparts. And not only was such a working-class tradition harder to sustain in a coalfield with a high level of occupational pluralism. The coal mines of this district were also far worse to work in. The thin seams completely transformed the job of mining coal. Work done standing up in Springhill was performed lying down in River Hebert. A miner recalled one night he was crawling down but found himself stuck. He reached up and slid down on his side. The space was too thin to allow him to go down on his side. He finally slid down on his back and bumped his nose on the roof of the mine. It is with a certain understatement that he concluded, "That's a little too thin".[58]

With time one got used to working in the thin seams, and when miners from the Joggins field went to Springhill they found it hard to adjust to the idea of a roof hanging dangerously high over their heads. But it was far harder to get used to the abysmal wetness of many of the mines. When the Green Crow mine was opened in Joggins, some workers would lie down in puddles of water and others work while streams of water poured over them. Descriptions of this work make it sound like some of the most degrading work ever performed by coal miners: "You were wet. The water would freeze on the machines. You'd lie right in the water — you'd be cutting and the water would run right over you. You had to sit home about half an hour before you got your shoelaces off — they were frozen right solid". Another miner remembered the feeling in his legs: two sticks rubbing together, because the wet overalls had long since frozen solid in the bitter cold. He offered the typically understated judgement that the mine probably did not live up to the Coal Mines Regulation Act. The verdict of another was less cautious: the Green Crow was "deep and wet and hateful".[59]

Standards and amenities in this district were more primitive in almost every respect. There were no wash-houses. Men would have to walk home — often for

58 Transcripts, Joggins, pp. 50-51.To go from level to level in the last mine in River Hebert, which was open in 1979 at the time of the field research, one slid on one's back; in many places there was insufficient room to crawl, let alone walk.

59 Transcripts, Joggins, p. 51; Transcripts, Joggins, p. 89.

miles, for this was a district of dispersed settlement — in their wet pit clothes, shivering in the winter wind. Some reported working two consecutive shifts on a regular basis, 16 hours a day, in some surface jobs. Miners were often not allowed to go home early once the day's work was finished, and they were expected to do a lot of things for themselves: "You had to load the coals and push the cars yourself — it wasn't too pleasant, either....I wouldn't say it was too much of a mine", remarked one miner of Strathcona. In this rural and dispersed coalfield, the Coal Mines Regulation Act was little more than a fiction.[60]

Bootleg pits operated illegally by the coal miners themselves underlined this coalfield's rather distinctive ambience. These illegal mines were rarely harassed by the authorities. In the 20th century the mines were forewarned of visits by the deputy mine inspector, who invariably noted in his report that the mine was not working when he visited it. Men in charge of the mine would obtain a slip for a load of coal from a legitimate mine, and change the date on this one slip every day. In general, miners were not paid a wage; whatever proceeds a group of men received for their coal would be split evenly among them. Closely related, although legally distinct, were the very small pits run by men on a legitimate basis, such as the "Toad" mine in the 1920s. This mine employed eight men, and used a horse-gin: 30 tons of coal would be produced for local markets every day. Although one man was legally the proprietor of the mine, he would not consider himself to be the boss. Such mines would resemble an enterprise of fishing co-adventurers, with the interesting distinction that while in fishing the co-adventurers were increasingly class-divided, here they were truly working on the basis of an equal sharing of benefits and risks.[61]

Still, even in this unusual rural coalfield, with its mix of small legitimate pits and bootleg mines, the miners developed their own outlook, albeit one with different characteristics than that of Springhill. Men shared an outlook of independence, although they were far less disposed to develop an effective unity or a sense of common opposition to the employer. In the absence of a stable economic base, trade unionism tended to be weak and the frequent working-class struggles had the episodic and fiery character of peasant jacqueries. Even men who went through the horrible experience of the Green Crow developed a sense of loyalty to coal mining and regretted the end of the days of mining. "A rough job", in the words of one, "but you get to miss it after awhile".[62]

On the other hand, the Springhill miners, given the objective capacity to develop a more continuous tradition, became the province's most stalwart supporters of radical trade unionism and workers' control in the years before the First World War, mounting 27 strikes in 20 years. "Can nothing be done with these strange men?" asked J.R. Cowans, superintendent of Springhill, in the

60 Transcripts, Joggins, p. 12; Transcripts, Joggins, p. 31.

61 Transcripts, Joggins, p. 70.

62 Transcripts, Joggins, p. 4.

course of the titanic 22-month strike for recognition of the United Mine Workers of America, adding contemptuously but not inaccurately, "They have become posessed of the happy idea that 'the mines are grossly mismanaged', and they would like to suggest how matters should be straightened out. 'Angels and ministers of grace defend us!' Every man Jack of them has his theory and no two theories are alike. Every mother's son of them knows much better how to manage the mine than he knows how to mind his own business".[63] He had easily identified his problem, but actually doing something about these "strange men", these tenacious, rooted and independent miners who challenged the coal companies and the state in so many ways from 1890 to 1925, was to be a far more difficult and protracted affair.

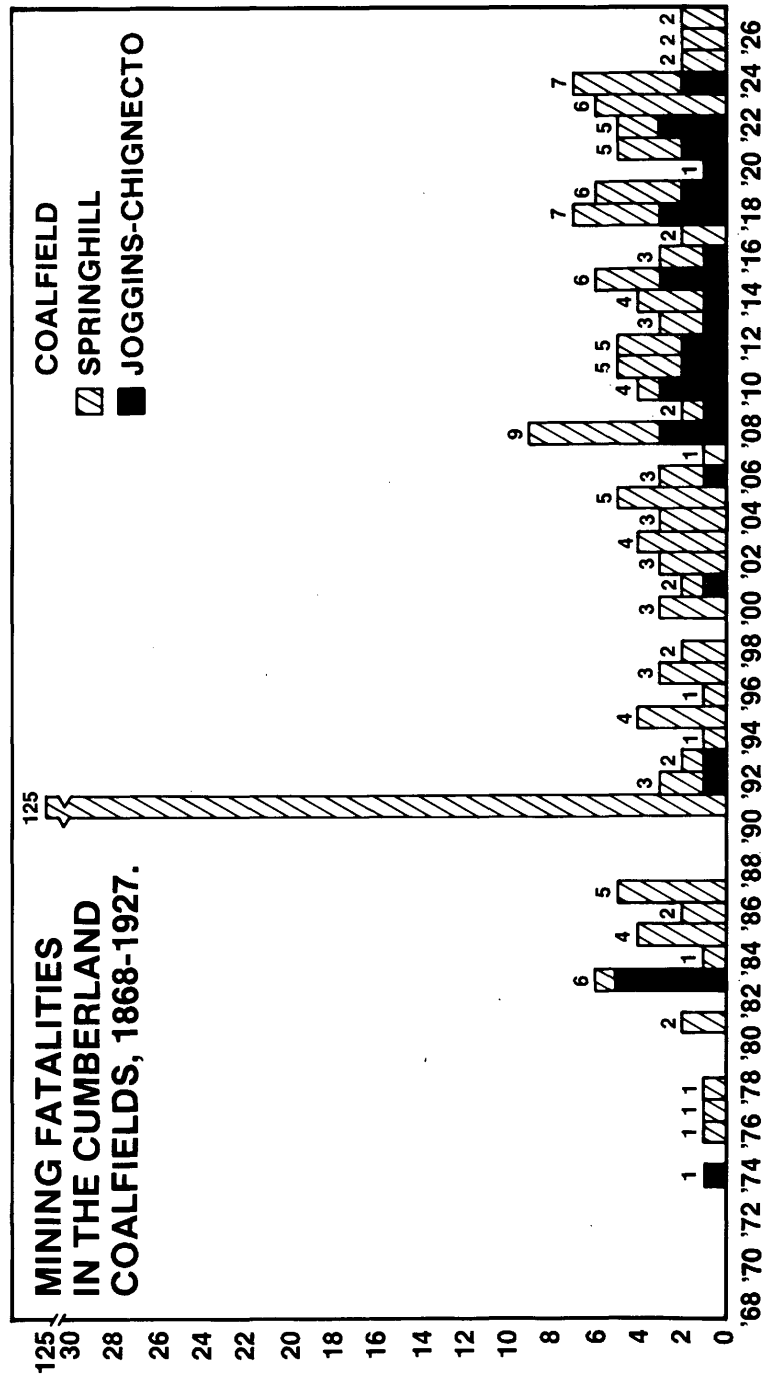
The miners' outlook was profoundly historical: it was shaped in the mines, those vast historical documents adding level under level as generation succeeded generation, and finally given its most explicit expression in the miners' collective protests, which mystified outsiders with their appeals to forgotten quarrels and decades-old settlements. The counterpart to this rooted collective historicism, and forming the other axis of the miners' outlook, was the precariousness that threatened the miner with death and his community with extinction. The issue of death not only throws into relief the most important values by which people live their lives and evaluate their experience, but it also suggests ways in which the coal-mining communities were distinctive. For the general 20th-century pattern of "inverted death", in which dying has ceased to be socially crucial and the collective rituals surrounding it have become wooden and perfunctory, does not apply here. Death, this palpable presence underground, intensified the solidarity of workers menaced by a common enemy. On the surface, it brought the community together in powerful expressions of its collective life. If death in bourgeois society as a whole became ever more privatized and the rituals marking it ever more superficial, death in the mines, inherently collective and social, continued to be marked by unifying rituals.[64]

A total of 275 men and boys were killed in the coal mines of Cumberland County from 1873 to 1927 (See Figure Three). The pattern of coal-mining fatalities in the County was unusual in coal-mining terms, because of the Explosion of 1891. If we treat the Explosion deaths in the same way as others, it appears that mining conditions, worsening in the 1890s (when 144 of the fatalities occurred), gradually improved thereafter. Yet the high *number* of men killed in the Explosion did not necessarily represent a qualitative worsening of conditions in 1891, for in the period of questionable shot-firing, misfired shots, burns, and even small explosions from 1888 to 1891, the number of men caught in violent mine explosions was essentially a matter of chance. If we take the less spec-

63 *Herald*, 15 September 1909.

64 Philippe Ariès, *L'Homme devant la mort* (Paris, 1977); Pierre Chaunu, *La Mort à Paris, XVIe, XVIIe et XVIIIe siècles* (Paris, 1978); Richard Huntington and Peter Metcalf, *Celebrations of Death: The Anthropology of Mortuary Ritual* (Cambridge, 1979).

Figure Three



tacular, "normal" mining fatalities, we see a worsening of the rate: two per year in the 1880s, 1.7 in the 1890s, 3.5 in the first decade of the 20th century, 4.6 in the following decade, and 4.1 per year in the period 1921-1927. Of the total number of deaths, 46 per cent were caused by gas and dust explosions, 19 per cent by falls of rock and coal, 12 per cent by mishaps in the slopes and travelling ways, eight per cent by mine cars and locomotives, eight per cent by miscellaneous underground causes, five per cent by surface mishaps, and one per cent by accidents directly involving explosives. In American terms, these results place Cumberland County in the "western camp" of mining accidents, with a small percentage of fatalities caused by falls of rock and coal, and a large percentage accounted for by explosion. From 1873 to 1914, the fatality rate of 12.1 workers per million short tons was more than double the general American rate of 5.65 workers per million short tons.[65]

The major causes of death in the Cumberland coalfields — falls of coal and stone, the transportation system, surface accidents, mine explosions and fires, and the bumps — all seemed beyond the control of individual human agency. Falls of stone and coal, for example, which killed 53 workers in this period, usually killed rapidly and without warning, as suggested by a description by his partners of William Harroun's death while "drawing pillar" in 1895. The roof seemed "hard and sound", testified one, and he had no sooner stepped off the plank in the place and walked about ten feet, when he looked around and thought he saw Harroun fall. He was under a stone. Another witness to the accident remembered: "I was filling coal right below him and was looking up all the time for fear lumps of coal would roll down and hurt me. I saw the deceased straighten up and look as if he was looking towards the open end, just then I saw the stone drop, it fell from the open end first and came across the face to where he [the deceased] was standing". Ira Ripley's 1906 death in Joggins, as described by his buddy, had a similar quality of implacable swiftness. "I was cutting and Ira was shovelling", his partner remembers in testimony suggesting the close bonds which grew between butties in the mine, and "He remarked to me that he was tired. He had to walk a step or two in shovelling the coal. Looking up he saw that there was one corner which needed cutting to square up the 'face' and he said: 'I will square up that corner if you will go and get an auger'. I was on the point of saying I will finish this and you go and get it, when I remembered that it would be easier on his legs if he finished it, and I went for the auger". When he came back he heard men talking, but not Ira, normally so talkative and cheerful. In the place he found his lamp but not him. Looking about, he came to a piece of top coal, and underneath was the body of his friend, his temple gashed, his nose flat, his chin horribly cut. It had happened so quickly and quietly that a man working 25 feet away had heard nothing. When Natalie Gualtieri died in Spring-

65 *Mines Reports*, 1873-1927; Albert H. Fay, comp., *Coal-Mine Fatalities in the United States 1870-1914, with Statistics of Coal Production, Labor, and Mining Methods by States and Calendar Years* [Department of the Interior, Bulletin 115] (Washington, 1916), pp. 23-7.

hill on 16 January 1895, his partner Joseph Austello later told an inquest, the stone had fallen ten minutes after they had started working; there was no warning, "the roof was quiet and the fall came just in a minute, deceased had not time to say anything to me other than to call out, 'Joe'".[66]

Misfortune, luck, fate, Providence: such deaths seemed to invest such abstractions with real efficacy. Large rocks, concealed by the seams themselves, would tumble down, foreshadowed only by the occasional sound of the "working" roof. (When coal mining experts discussed the colliers' "conservative" resistance to mechanization, they rarely observed that noisy machines drowned out even this elementary warning.) In the River Hebert mines, workers were threatened by the trunks of fossilized trees which could come plummeting down to the floor of the mine.[67] Striking down the cautious and the incautious, without warning and with terrible speed, the falls of roof seemed to stress the collective fate of the miners.

Death stalked men in mundane situations and seemingly ordinary places. The transportation system, so frequently disrupted by derailments and runaway coal cars, had all the dangers of a railyard with the added hazards of underground work. Everywhere derailments threatened men and production, and men were also confronted with the intractable (and not fully understood) problems of metal fatigue. Even the tiniest miscalculation could bring death. The communication system by which the enginemen decided whether to hoist men or not was rudimentary, and could easily create dangerous situations. William Maddin described one death in Springhill triggered by someone merely speaking to the engineman and distracting his attention for a moment. He let the rake go too far past its proper station and a late-arriving worker was crushed. Runaway trips would rush down the slope, killing workmen caught in their path; workers who wandered into the wrong passage would be smashed by the ballast box. Everywhere coal cars seemed to menace everyone. In Maccan, the underground manager and a coal cutter were both crushed when a car, loaded with coal, broke away from its chain and forced them under its wheels. Death seemed to be visited upon the careful and careless alike. A young man, coupling a line of coal boxes in No. 2 at Springhill was thrown back when the whole train of them suddenly started. The rake passed over his body. The miners expected to find him dead, but although his head, face and body were severely cut, he recovered completely. Conversely, William Cherrie, a young Scots collier renowned for his caution, enquired carefully about the safety of travelling along the "railway level" at Springhill, and did so only after satisfying himself that the journey would be completely safe. He was killed instantly by the trip after travelling a

66 Testimony of John Merlin and William Wilson, Coroner's Inquest, 20 January 1895, Vol. 9, RG21, Series "A", PANS; *Herald*, 15 February 1906; Inquisition on the body of Natalie Gualtieri, 18 June 1895, Vol. 9, RG21, Series "A", PANS.

67 Clara Dennis, *More About Nova Scotia, My Own, My Native Land* (Toronto, 1937), pp. 81-2. The miners called the fossil trees "pots" and the places they fell from "pot holes".

short distance. Workers on occasion would ride upon full coal cars, running the sometimes fatal risk of being crushed against the roof. Situations which appeared safe turned out to be horribly dangerous. After combatting a fire in No. 1 slope through much of September 1897, the company finally judged it safe to reopen the affected area in September, no sign of smoke, fire, or damp having been detected for six months. "We trust and think that the Fire is absolutely out", wrote J.R. Cowans to the Department of Mines, "and that there will be no difficulty in opening up on either side, but you may rely upon it, we will prepare for the worst". Could one ever prepare for the worst in this unforgiving environment? The campaign against the fire went well; an official visit was scheduled. The official party reached the burning district. Then the roof fell in very close to them, full of burning debris. James Ferguson, one of the pioneers of the Springhill mine and a hero of 1891, was trapped behind the burning roof and completely enclosed. His companions worked feverishly to release him, but as soon as they cleared away one load of stone, another fell in its place. Trapped in this terrible oven, Ferguson cried out desperately for help, but there was nothing anyone could do for him.[68]

Deaths like these seemed to emanate from an unknown logic, capriciously assigning rewards and penalties arbitrarily. The coalfields still echo with tales of miraculously close calls and the memories of those who are only too aware of surviving where so many others perished. One way of dealing with this realm of uncertainty was to resort to superstitions. In 1895 the prediction of "some gypsey" drove some miners out of Joggins Mines, although not so many that the mine had to close. Madame Coo, an Indian prophetess, foretold the 1891 Explosion and her prophecies were still driving miners out of the Springhill mines in 1902. The Springhill colliers combined superstition and their critique of management in a belief that fatalities occurred when highly placed company officials visited the pit. Robert Drummond, leader of the PWA and a staunch Scottish rationalist, ridiculed the colliers mercilessly for such childish beliefs. However, he dealt with his own narrow escape from death in the pit no less magically by attributing it to "Providence!"[69]

This resort to magical thinking, common in all occupations which involve regular contact with sudden death, also reflected a deeper epistemological difficulty in coming to terms with mining fatalities. The law dealt with violent deaths in the coal mines by dealing with guilt or innocence according to the standards of liberal voluntarism; the individual coal miners, dealing with the

68 Swift to Cowans, 15 January 1890, Swift Letterbooks (for examples of transportation difficulties); Maddin to Gilpin, 9 October 1889, Vol. 9, RG21, Series "A", PANS; *Herald*, 3 February 1909; *Amherst Daily News*, 27 April 1905; *Amherst Daily News*, 20 April 1900; J.R. Cowans to Edwin Gilpin, 18 September 1897, Vol. 9, RG21, Series "A", PANS; *Amherst Daily News*, 8, 9 December 1897.

69 *Amherst Semi-Weekly News*, 19 March, 5 April 1895; *Maritime Mining Record*, 18 June 1902; *Trades Journal*, 1 August 1888; Drummond, *Recollections*, pp. 21-2.

immediate situation, tended to superstition and fatalism. In the 19th century neither developed the kind of structural analysis which could have interpreted the phenomenon more adequately and which could have led to an effective and militant intervention. Each type of mining accident raised questions about the implicit decisions and judgements which had structured mining practices. Deaths from the transportation system which seemed "inevitable" or "fortuitous" on an individual level, seem less so when we consider that mining legislation made an implicit trade-off between miners' lives and coal production by allowing companies to build mines without continuous walking spaces beside the tracks or signalling systems which would have effectively informed workers when it was safe to travel. The deaths of young boys caused by the snapping of wire ropes to which ballast boxes were attached were "unpredictable" in one sense, but "structurally" predictable in another. Assigning young, inexperienced workers to such risky work involved an implicit decision as to their worth. If one also considers the sloppy way in which ropes were inspected in Springhill, the lack of training of those responsible for inspection, and the custom of using ropes which were (as the deputy shiftman reported at one inquest on a young boy) "worn a good deal in some places", such deaths seem far less mysterious. Nor were companies terrified by the law in such cases, since coroner's juries, even when convinced the law had been broken, rarely recommended prosecution. The coal mine in Joggins had a particularly bad record in this regard. The death of Amos White, a 14-year-old point-tender who died on the main slope of the Phenix Coal Company on the night of 5 November 1889, seemed purely accidental to the coroner's jury. But it did not seem so to others, who noted the absence of lights on the bankhead and the sworn testimony by company men that the rope whose breaking had precipitated the death had not been inspected according to law. Hardly neutral testimony, but not to be lightly dismissed either, given the company's own admission that the Mines Regulation Act was not rigorously enforced.[70]

70 *Trades Journal*, 12 October 1881, Gaspard Hebard to Edwin Gilpin, 26 November 1889, Vol. 9, RG21, Series "A", PANS; *Acadian Recorder*, 16 September 1892; *Mines Report* (1915), p. 114. The law in 1873 (*Revised Statutes of Nova Scotia*, Fourth Series, Chapter 10, "Of the Regulation of Mines") specified that every underground plane on which persons travelled which was self-acting or working by an engine, windlass, or gin, if more than 30 yards in length, was to be provided with proper means of signalling between the stopping places, and with sufficient man-holes for places of refuge every 20 yards. Every road on which persons travelled and on which horses or other animals drew more than ten tons of coal per hour, was to be provided with man-holes every 50 yards. An amendment (*Statutes of Nova Scotia*, 52 Vic., Cap. 22, 1889), specified that unless the inspector provided an exemption in writing, companies were required to provide proper means of signalling between the lower end and the entrance of every working back or counterbalance used for raising orlowering coal or other minerals. In 1891 (54 Vic., Cap. 9), the 50-yard provision was changed to 25, but travelling ways requiring places every 50 yards did so only if there was no standing room of at least two feet. In 1923, it was determined that every road on which a horse or other animal was used underground, or by which it had to pass to get to its work, was to be of sufficient dimensions to allow the horse or other animal to

Transportation deaths, each individually a matter of "chance" or "bad judgement", similarly make more sense when placed in the context of a chaotic transportation system. "There is Considerable Confusion in a morning at the riding rakes with the Men and their picks and drills", noted Swift. "[T]here is a box attached to the riding rakes to put the picks in and drills this box being in the front end does not Come over the bank head and consequently men have to walk a little distance down the slope to put their picks in the box and to avoid this they pass the tools over one another's heads and some of them take the picks in the seats with themselves[.] [S]hould the Rideing rakes go of[f] the track there is a liability of them sticking the picks in one another altogheter [altogether] it is a dangerous practice". How much more perilous was going to work in Chignecto, where one carried one's pick as one walked down the steeply pitching slope. The press discussed a strike on this issue in 1904 as an example of the frivolous reasons men could find for going on strike; it actually demonstrated a prudent regard for safety.[71]

Of all the dangers of coal mining, explosions were the most difficult to assess in the conventional language of individual guilt or innocence. We have already noted the carelessness, noted by Swift and the deputy inspector of mines, which surrounded shot-firing in Springhill on the very eve of the explosion. There were real questions, eloquently documented in Swift's letters, about how much difference dust made in coal-mining explosions; there is also evidence that miners and government inspectors were aware of a developing crisis in the mine. John Moffatt, later the Grand Secretary of the PWA and a worker in Springhill at the time of the Explosion, later remembered pervasive anxieties in the pit about the high levels of dust in the mine:

> I was drawing the pillar stumps on the level with an Englishman, a Frenchman, and a Scot, quite a happy combination. After becoming acquainted I ventured the opinion that the place was dangerously dusty coal dust lying on the travelling ways and all other ways in this district. My buddies being quiet men said nothing. The mine deputy in charge of this district was a Pictou Scot called Tom Wilson. Our kinship soon made us very close friends and we had many confidential talks alone, mainly about the dry and dusty condition of the mine. Having had long service in the Pictou mines, then noted for their gas, Tom Wilson often said that our mine No. 1 would go up some day. I had much the same opinion but did not openly express it having very little knowledge of other working places but the one I was in, and again our place was about finished and I intended geting out

pass without rubbing itself or its harness against the roof or sides, or against any bar or prop — an unenforceable provision (*Statutes of Nova Scotia*, 13 Geo.v., Cap. 54).

71 Swift to Cowans, 21 February 1890, Swift Letterbooks; *Amherst Daily News*, 12 January 1904; *Herald*, 13, 14 January 1904. In this last-mentioned story the affair was referred to as a "trivial matter".

> of No. 1 mine if I could.

When Moffatt went to visit his neighbour who worked in the mine, he noticed that his beard had been singed on one side:

> "On inquiry he told me it was caused by flame which set the coal dust on fire every time a shot was fired. Further more he said nearly every time a shot was fired on the balance it flamed and all the men working there were afraid that someday the flame would run out to the chute where much coal dust was lying. Knowing quite well what the men were afraid of I made up my mind to leave this mine.

Moffatt's analysis was borne out eloquently if not gramatically by William Maddin, the deputy inspector of mines. After describing the third case of burning through gas in 1889 alone, and in a place the fire-boss had declared free of gas, Maddin remarked, prophetically, "Now thare is Some one rong in this case. And this is the third case of burning. And no plase to draw a line. has the Men rite to examen thare place, Aney plase, A man gets burnt by gass [?] thare might be gass enough to cause an Explosion that would destroy life. And property". The underlying "structural" reality was that the documented safety fears of miners and inspectors could not, for economic reasons, lead to a closure of the mine while its evident problems were sorted out.[72]

After the explosion, the Department of Mines concealed the Cumberland Railway and Coal Company's violations of the province's coal mining laws. Reports that bratticemen were under orders to keep the accumulation of gas in the mine secret reached the department; although William Maddin blamed the reports on carping fault-finders, his superior, Edwin Gilpin, came to the conclusion that the company had indeed violated the law on questions of gas, but, typically, declined to prosecute, on the grounds that the concealment of high gas levels did not necessarily represent the intention of the management.[73]

Indeed, no mine manager ever went to jail for violating mine safety laws in Cumberland County, although such violations of the law — judging by the records of the Department of Mines — were commonplace. Coal mine laws were routinely disobeyed at the Joggins. Mines in the area went for as many as four months without an underground manager, working two lifts with no one but an overman in charge; they also worked at night without even the overman to look after things — in direct violation of the law. The Joggins also worked without properly certified men to hoist men out of the pit. At the Bush Mine, the

72 John Moffatt, "Springhill Explosion", microfiche files, A F 21 H/09D, 10-E-41 (00), 1878-1958, Department of Mines, Halifax; Swift to Cowans, 5 February 1890, Swift Letterbooks; Swift to Cowans, 13 June 1890, Swift Letterbooks; *Trades Journal*, 18 February 1891; Maddin to Edwin Gilpin, 31 July 1889, Vol. 9, RG21, Series "A", PANS.

73 Gilpin to C.E. Church, 23 May 1892, Vol. 9, RG21, Series "A", PANS.

boiler used to leak and the water gauge would plummet — but the men would be instructed to start the fire and put the water back in it, thus taking the chance of a boiler explosion every day. Exhausted bankhead staff at the small mines, charged with the responsibility of watching the boiler, would fall asleep and run the risk of a large bankhead explosion. Prompted by such serious problems, unions in the Joggins coalfield appealed to the department to improve the quality of its inspection so it could enforce the law.[74]

The capacity to explain mining deaths in individual terms broke down altogether in the case of the "bumps" which have traumatized Springhill for most of the 20th century. In an unusual move, the government brought in American mining expert George Rice, who wrote a comprehensive study of the problem. He was thoroughly critical of past mining methods in Springhill and recommended an early transition to longwall mining. Rice pointed out that bumps — bursting of the coal seam as a result of the pressure of superincumbent strata — reversed the normal hierarchy of mining dangers by making ordinary work in the bords more dangerous than drawing pillar. Apart from that, the phenomenon seemed to defy all the predictive measures — such as measuring air flow or barometric pressure — which men had evolved in response to coal mining hazards. It was a terrifying business, because the bumps were certain to occur: rather than an extraordinary disaster which, once finished, could be placed out of mind, the bumps went on for years, spreading a disaster out from week to week. The first bump in Springhill was in 1904, and the first victim was 15 years old. Ephraim Bradley "was sitting close to the fatal spot, whip in hand, while the fillers were loading the coal box team he was driving. Then in an instant, came the tremendous bumping and cracking and the shooting down of tons of coal, and another young life was fiercely crushed out". An older miner remarked, "Bumping...is a frightful experience and always makes my hair stand on end". As he noted, it resembled an underground earthquake, bringing the roof and the pavement close together with a tremendous noise.[75]

For the next 54 years the bumps were to dominate the lives of Springhill miners, at first only as part of a generally hazardous workplace, but at the end as the greatest single threat to the community. They were a curious form of danger, more pronounced in Springhill than in other mining communities. They were strangely abstract in their origins, and the most divergent theories explained their presence. It seemed to violate common sense that men could die partly because the roof was too strong, but such was the case. It was a hazard that seemed peculiarly suited to the collective and structural nature of coal mines, caused by the stresses within the structure as a whole and not by any individual. Not all the bumps were dangerous: of 171 bumps recorded from 8 October 1924 to 26 June 1932, only four brought death to workers. But in the

74 *Herald*, 7 July 1904; Transcripts, Joggins, p. 36; Transcripts, Joggins, p. 35; Transcripts, Joggins, p. 35; Transcripts, Joggins, p. 50.

75 Rice, *Occurrence of Bumps, pp. 30-31; Herald*, 2 January 1904.

early 1920s, the number of dead men rose steeply, and an almost palpable atmosphere of gloom and panic can be sensed in the records of the union. The bumps imposed a new landscape of doubt on the mine — in particular No. 2 of Springhill.[76]

Let us also remember that fatalities were only one aspect of an incalculably larger phenomenon of mining accidents, for which the statistics are sketchy but suggestive. According to one calculation, Springhill recorded 71 accidents from 1898 to 1908, 28 of which were fatal. Nor should we overlook the important role played by industrial disease, for much as contemporaries discounted the possibility of respiratory diseases caused by mining, it is difficult to think of a good reason why the mine dust Swift so often noted would not have been as hard on lungs as it is today. Only "miner's anemia" received much attention in official mining circles of Nova Scotia. By concentrating on deaths we have unavoidably underestimated the true impact of mining on the bodies of men.[77]

How did the workers absorb these harsh events? The coal miners were in much the same position as soldiers at the front, living with the constant threat of death, and they shared some of the disciplined psychology and stoicism of the battlefield. Many developed an impressive capacity to endure physical pain. Swift sympathetically described the stoicism in a young boy, whose face was badly cut by a flat metal sheet: "He never flinced [flinched]", he remarked, "being a Smart, hardy little fellow". The *Springhill News and Advertiser* reported a similar case of courage in a young lad who walked uncomplainingly for good mile from the mine with a severe scalp injury, which was ultimately treated with 11 stitches. One miner, suffering from black-lung, remembers his frequent injuries in the pit with this comment: "Well, I was cut up a few times — you don't call them injuries here. They'd sew you up and that's it. You get after a while you're so case-hardened to it, you don't mind it".[78]

Stoicism, courage, an ability to withstand pain: these very "masculine" attributes had nothing to do with a trivial, individualist "machismo" exulting in danger for its own sake. These attitudes to pain were intertwined with collective ideals of manliness and physical courage. One of the most profound aspects of the coal miners' outlook can be found here, in his esteem for forebearance and

76 Rice, *Occurrence of Bumps*, Supplement. For the subsequent history of bumps in Springhill, see Ian McKay, "Springhill 1958", *New Maritimes*, Vol. II, No. 4 (December 1983-January 1984), pp. 4-16.

77 Helen Goodwin, "Community, Class and Conflict: The 1909-1911 Springhill Coal Strike", p. 44. See also Swift to Cowans, 4 January 1890, 11 June 1890, Swift Letterbooks; F.W. Gray, "Ankylostomiasis: 'Miners' Anemia': A Resume of European Experiences", *Transactions of the Mining Society of Nova Scotia*, XI (1906-1907), pp. 75-116. The latter disease achieved its first legislative recognition in the *Statutes of Nova Scotia*, 5 Geo. V, Cap. 1, 1915, "An Act to Provide for Compensation to Workmen for Injuries Sustained and Industrial Diseases Contracted in the Course of their Employment".

78 Swift to Cowans, 4 October 1890, Swift Letterbooks, *Springhill News and Advertiser*, 20 November 1897; Transcripts, Springhill, p. 112.

bravery. Purely local traditions of heroism — all the more powerful for being so local, so rooted — were passed on through the generations. What was celebrated was a collective practical humanism, made possible by the mining environment and consciously perpetuated through tradition and precept.

The 1891 Explosion was the source of many of the stories which comprised the heroic tradition. The exploits of Dannie Robertson, a young driver, are still recounted today. At the time of the Explosion, Robertson was driving a rake of empty boxes into the level on the west side. He was knocked backward into the box by the first blast of the flame; his horse was killed instantly. After lying dazed for a few minutes, he was brought to his senses by the sound of crashing timber and collapsing roof. Springing up from the box, he discovered that his clothes were on fire, his horse dead, and that he was alone. He threw off his coat and vest, and started to find his way out. Then he heard the cries of Willie Terris, a trapper boy, who had saved his own life by hiding under his seat. Although Robertson was almost delirious with the pain of his burns, he took Terris on his back and ran with him to the safety of the slope.[79]

A similar, but less famous, incident involved yet another fire in the Joggins Mine on Christmas Eve, 1908. "In some way not yet explained the Brattice cloth, a device consisting of burlap or canvass curtains in screens which cross the chute enabling the free circulation of air, caught fire, and before the unfortunate men were able to escape they were so seriously burned that death in...two cases resulted almost instantly", according to the report in the *Amherst Daily News*. What is interesting is that one of the men who suffocated, John H. Coleman, Jr., was not trapped behind the blazing screen at the time of the fire; he could easily have escaped the mine. Instead he rushed to the screen in an effort to save his companions, and died himself in the attempt.[80]

The collective struggle of the miners within the mine created a strong sentiment of solidarity which manifested itself suddenly in time of crisis. Many left-wing historians and commentators have stressed this tradition of "blood on the coal", and made the point that mining perils turned men against the system as a whole. This argument conveys what many historians feel should have occurred better than it describes a more complicated historical record. The experience of death in the pits did not, by itself, radicalize, or even intensify a feeling of class difference. The greatest crowds which turned out for the funeral processions after the 1891 Explosion came to watch the ceremonies for manager Henry Swift. He was a man who had been despised by the miners less than a year before; he was now something of a hero. The company donated land for burial plots and did everything to impress the local population with its compassion and concern. (It then proceeded to disregard the laws regarding ventilation.) There is very little evidence to suggest that violent deaths in the mine stimulated radical-

79 Morrow, *Disaster*, pp. 84-6.

80 *Amherst Daily News*, 26 December 1908. See also *Herald*, 28 December 1908.

ism. That a radical critique was later made of fatalities in Cape Breton, including the major 1917 New Waterford explosion, tells us more about the depth and audacity of postwar radicalism than about the general pattern, for such an explicit politicization of disaster was rare in both the 19th and 20th centuries.[81]

The legacy of mine danger was altogether more ambiguous. It created a vivid sense of occupational distinctiveness and a strong collective drive to mutual aid. Those who had worked in the mine were convinced that those who had not shared this experience could never understand it. Like men returned from the front, they were struck by the gulf which existed between their world and the surface. One could draw upon this occupational separateness to create an awareness of class, a sentiment of unity with other workers — but this sentiment did not emerge with mechanical regularity from the mine. One could, with greater ease, build upon this sense of difference a parochial populism, based on defending "our men" against outsiders, or perhaps a liberalism, stressing the urgent need for miners to have representation in government to secure legislation in the interests of the trade. In the wake of 1891, for example, the PWA won from the governing Liberals a reform in the mining law banning powder in gaseous mines — a trade-union achievement with direct consequences for the level of fatalities. But in a deeper way there was a connection between the dangers of mining life and working-class protest. The shared experience of the mine created an egalitarian and collective ethos. Bonds between workers in the pit and between families on the surface were very close. This intangible quality of mining towns, a subtle, penetrating solidarity, is not easily documented, but no one disputes its real power. Collective house-building and collections for injured workmen were two visible aspects of this deeply implanted structure of mutuality. "There a close bondage in a mining community", one Springhill miner generalized. "People would come to your support if you were down". One of the more moving personal documents saved by individuals in Springhill is a battered subscription book, which records the donations given by the miners to help an injured comrade. The union minutes record many instances of miners taking turns to sit up with badly wounded friends, or paying for nurses, or helping in other ways.[82]

The intense solidarity of the mining community was the gift of the mine. It was born of the uncertainty of coal-mining life. The solidarity of a common bereavement was a powerful influence in the coalfields. In Springhill the 20th-century bumps could be felt throughout the town, and quickly created a sense of common danger. Once a bump had been felt, one man recalled from his childhood, he would race to the fence of the Springhill mine and watch for his father to come out of the lamp cabin. He would peer through the dark, trying to recog-

81 Morrow, *Disaster*, p. 115; David Frank, "The Cape Breton Coal Miners, 1917-1926", pp. 227-9.

82 Transcripts, Springhill, p. 74; collection book in the personal possession of Mr. Neil Noiles, Springhill; Joggins Minutes, 13 April 1898, 27 December 1905.

nize his father, and when finally he identified him by his particular walk, he would race home with the news, "He's alright!" Everyone with men in the mine would have worried in the same way. One of the most commonly repeated stories in the popular repertoire is that of mistaken identity, as in this account of an anxious father arriving at the scene of an early 20th-century explosion in Joggins as the bodies were being recovered from the pit: "He said, 'Any of them up yet'. And I said, 'Yes'. I said, 'Sam Thompson'. He said, 'Where's the body?' I said, 'Over in the men's waiting room'. He said, 'Come on over'. So we went over. He said, 'That's [my] John'. And John had a gold tooth, and he went over and raised the lip and, sure enough, it was him. You see, his face was black as could be. Couldn't recognize him that way". After the Springhill Explosion of 1891, one mother, searching through the bodies for her child, was finally able to identify her son only by the traces of her needlework on the shirt of an anonymous corpse. Such events, and their repetition in the oral tradition through the years, powerfully reinforced the sense that the death of the individual miners was collectively experienced, that the victims and survivors of the mine were united by death.[83]

The funerals of the mining town were impressive displays of the solidarity of the community. In 1906, the Joggins miners marched all the way from Joggins to the Maccan River bridge in a funeral procession. In Springhill, a hearse was provided by public subscription in 1880, although by 1888 its dilapidated appearance was severely criticized in the trade-union press.The tradition in the 1870s and 1880s in the town was to stop work from the day of the death until the day of the funeral; however, miners complained that by 1887 the pits worked full blast even on the funeral day. The *Trades Journal* ran brief reviews of town funerals, as in the case of the funeral of John Scully, "the largest ever witnessed in Springhill", for which the members of Pioneer Lodge of the PWA turned out "in full force and in regalia". After the death of James Ferguson, his brother Orangemen walked in procession, and, according to the newspaper, "the large turnout showed the respect in which he was held". The public displays of grief after the Explosion of 1891 were overwhelming. Ministers attempting to read portions of scripture were overcome with emotion. Wakes were held throughout the town, and houses at night were brightly lit, as was the custom. Mourners drifted from house to house during the night.[84]

The workingmen defended their right collectively to stop work for a funeral, against all critics and far into the 20th century. In Joggins in 1898, the manager of the mine requested the master workman of Holdfast Lodge to tell the men merely to send a delegation to a funeral, instead of stopping production. The

83 Transcripts, Springhill, p. 164; Transcripts, Joggins, p. 22 [the actual names have been changed]; Morrow, *Disaster*, p. 69.

84 Joggins Minutes, 17 April 1906; *Trades Journal*, 7 July 1880; 25 July 1880; *Trades Journal*, 13 April 1887; *Trades Journal*, 2 September 1885; *Amherst Semi-Weekly News*, 5 April 1895; Morrow, *Disaster*, pp. 72-3.

minutes, however, note that "it was moved and seconded that we lay idle tomorrow for to bury the dead Brother". In the margin the secretary added the defiant instruction, "Bro[ther]s to attend in a body". Clearly the manager and his workers had different perceptions of what the proper ritual was. In honour of Felix Landry, the pit was closed for three full days in 1910. The same pattern is to be found in Springhill. What had been perceived as a weakened tradition in the 1880s was a strong one in the 1920s. The historian Jean Heffernan described the funerals of the United Mine Workers: "There was a time when a funeral in town was really something. The band would be in attendance, the fraternal Order would march as well as the Mine Workers. Sometimes as many as a thousand people would be there". The right to observe death in this way was defended by the UMW even when union finances were depleted and the company applied significant pressure. Even through the troubled 1920s, when it had difficulty supporting the living, the UMW always found money for the dead. In 1921 it donated $500 to the upkeep of the cemetery grounds. When Hezekiah Jones met his death in No. 2 mine in 1922, the UMW bought "one of the best lots in the Cemetery" for him, as he had no known relatives. He was laid to rest in a grave deeded simply to the "Springhill Miners". After the bump in December 1924, named the "Jack Sweeney" Bump to commemorate the man who was killed in it, the management requested that the union allow men to repair the damaged mine. The union adamantly refused to grant the request, because funeral arrangements were considered of greater urgency. It was not quite true, then, to describe death in the community as a great leveller. It became a point of contention between the company and the coal miners, and on this point the miners usually won. Death brought to the surface an underlying difference in approach, a difference between the miners' hard-won humanism and the utilitarian calculations of capital.[85] Today the deaths of the pit are remembered in a way which reinforces their symbolic importance. To have an ancestor named upon the monuments in Springhill or River Hebert is an important indication of one's rootedness in the community. One hears, again and again, stories of disasters and calamities in the coalfields, and collectively they form a powerful tradition, which undermines the bleak anonymity of death by showing it to be a collective human experience.

Everywhere in this dark dominion created by necessity we find contradictions. The coal miners were cruelly oppressed and worked in an appalling environ-

85 Joggins Minutes, 18 February 1898; *Herald*, 29 May 1910; *Amherst News and Sentinel*, 17 June 1952; Springhill Minutes, 10 September 1921; Springhill Minutes, 11 March 1922; Springhill Minutes, 8 December 1924. See also Springhill Minutes, 31 March, 7 April 1923. It was true that the miners were forced to concede that only the particular mine in which the fatality occurred would stop work for the day of the death, but they continued to close down the entire complex for funerals. The company would thus lose one full day's production, plus whatever time remained in the mine in question. Given that No. 2 mine was both the most important and the most dangerous, this concession was not as significant as it might first appear: most fatalities occurred in the one mine.

ment, but they had the freedom to create their own traditions, and these were strengthened by the collective experience of death. The same language which united the mining men divided them from the rest of society, which understood little about mining life. The mentality created by the coal mine could be read in a "class way", and if one succeeded in merging a mining and a socialist outlook, the two were powerfully reinforcing — but this linkage was not an automatic one. The coal mine created a unifying context of discipline — shared by everyone — through the imperatives of its ventilation and pumping system and the hazards they entailed, but this same discipline could be turned against the mine itself when militant workers abandoned the pumps. The discipline and unity created by necessity consequently also served the cause of freedom.

It is hard, in the end, to imagine a more savage and inhuman industrial environment. Anyone who worked in a coal mine lived and worked on the margin. The least mistake, the least weakness or inattention, could result in death. Percy Hyatt, 13 years old, acting on a whim which tempts today's children in supermarkets, met his death on the bankhead: here was the coal conveyor, used for conveying coal to the boilers, and the boy balanced himself on the chain and allowed it to carry him along. While doing so he caught one of his feet in a link of the chain and was dragged along through a very small hole in the boiler house wall and torn to pieces. After the Explosion of 1891, rescuers discovered, in the midst of the smoke and debris, lost children, bewildered, crying out for mother.[86] All these deaths, all this pain, all this deeply structured, madly logical violence: and for what? Better balance sheets in Montreal?

Yet a moral condemnation conveys only one pole of the contradiction of coal mining. It is also hard to think of an environment where workers *en masse* enjoyed such freedom from supervision, such an opportunity to create and sustain their own distinctive outlook. Harsh though it was, men did not want to leave this workplace. They would humanize and civilize it, through their unions, their subscriptions for wounded comrades, their loyalty to each other. In this dark dominion they made a compact with each other, and the influence of their collective strength and self-activity was to be felt throughout the province. Their practical humanism and their creative tradition, born of these contradictions, ultimately transcended them. In this way, the most savage workplace was also the most civilized, and the dark dominion of necessity gave rise to the struggle for industrial freedom.

86 *Amherst Daily News*, 28 October 1903; Morrow, *Disaster*, p. 83.